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# WATER QUALITY CHARACTERIZATION OF 78 ACID PRECIPITATION MONITORING LAKES IN ATLANTIC CANADA

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Canada

**INLAND WATERS DIRECTORATE**
**ATLANTIC REGION**
**WATER QUALITY BRANCH**
**MONCTON, NEW BRUNSWICK**

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A copy will be made available in French upon request.

# TABLE OF CONTENTS

PAGE

Abstract .................................................. i

Resume .................................................. ii

Introduction .................................................. 1

Sampling Methodology and Quality Control .......................... 3

Results and Discussion .................................................. 5

- Sampling Stations .................................................. 5
- Geology .................................................. 5
- Water Temperature .................................................. 7
- Specific Conductance .................................................. 8
- Water Colour .................................................. 9
- Ionic Composition .................................................. 10
- pH .................................................. 13
- Alkalinity .................................................. 13
- Excess Calcium and Magnesium .................................................. 15
- Sulphate .................................................. 17
- Alkalinity, pH, Sulphate and Cation Interactions ......... 23
- Heavy Metals .................................................. 28
- Henriksen Nomograph .................................................. 29

Summary .................................................. 33

References ............................................... 35

Acknowledgement .......................................... 38

List of Tables ........................................... 39

List of Figures .......................................... 53

Appendix 1 ............................................... 77

Appendix 2 ............................................... 103

# ABSTRACT

This report documents the current water quality condition of 44 Nova Scotian and 34 Newfoundland lakes which comprise the Water Quality Branch, Atlantic Region LRTAP monitoring network. The lowest pH and total alkalinity concentrations are observed in highly coloured lakes as a result of natural organic acidity. However some clearwater lakes exhibit alkalinity deficits, indicating that strong mineral acid loading is also involved in the acidification of lakes in this region. Some seasonal patterns for water colour, pH and total alkalinity were observed for lakes in Nova Scotia and to a much lesser extent in Newfoundland. Alkalinity deficits, sulphate (IC) concentrations and estimated sulphate fluxes for these lakes are consistent with the expected LRTAP deposition pattern for the region. This suggests that lake chemistry is indicative of the present atmospheric deposition and thus the monitoring network should serve to assess the response of aquatic systems to future changes in industrial emissions.

The use of the Henriksen nomograph in coloured waters is discussed and employed using both sulphate (MTB) and sulphate (IC) concentrations. By using both sulphate (MTB) and sulphate (IC) concentrations, the Henriksen nomograph can be used to estimate the relative contribution of natural and organic acids in the acidification of lakes in Atlantic Canada.

# RÉSUMÉ

Dans ce rapport, est documenté l'état présent de la qualité des eaux de 44 lacs de la Nouvelle-Écosse et de 34 lacs de Terre-Neuve. Ces lacs sont inclus dans le programme de monitorage du TADPA de la Direction de la qualité des eaux, région de l'Atlantique. Les valeurs de pH et d'alcalinité totale les plus basses sont observées dans les lacs dont les eaux sont fortement colorées dues à la présence d'acides organiques naturels. Cependant, certains lacs dont les eaux sont claires démontrent des déficits d'alcalinité, indiquant ainsi que l'apport d'acides minéraux forts est aussi impliqué dans le processus d'acidification des lacs de cette région. Certains patrons saisonniers ont été observés pour la couleur de l'eau, le pH et l'alcalinité totale dans des lacs de la Nouvelle-Écosse et a un degré moindre à Terre-Neuve. Dans ces lacs, les déficits d'alcalinité, les concentrations de sulfates (C.I.) et les fluctuations estimées de sulfates sont consistants avec les patrons de déposition du TADPA anticipés pour la région. Ceci suggère que la chimie des lacs est indicatrice de la déposition atmosphérique actuelle et donc que le réseau de monitorage devrait servir à déterminer la réponse des systèmes aquatiques aux futurs changements dans les émissions industrielles.

L'usage du nomogramme d'Henriksen dans le cas des eaux colorées est discuté. Ce nomogramme est employé ici en utilisant les concentrations des sulfates obtenus selon la méthode au MTB et des sulfates selon la méthode au C.I. De cette façon, le nomogramme d'Henriksen peut être utilisé pour estimer la contribution relative des acides naturels et

organiques dans l'acidification des lacs du Canada atlantique.

# INTRODUCTION

The Water Quality Branch, Atlantic Region, LRTAP lakes monitoring program began in 1983 with the intention of providing water quality data sets amenable for the determination of long term trends of LRTAP related parameters. Two study areas were identified (Southwestern Nova Scotia and Newfoundland) which are not only geologically sensitive to acidification but also fall on different positions of the deposition gradient. The lakes selected for monitoring were chosen from the NAQUADAT data base and were originally sampled by various Environment Canada agencies, the Department of Fisheries and Oceans and the Nova Scotia Department of Environment. This selection of lakes was made based on the three selection criteria given in Table 1. The acceptable sites were divided into two groups representing the identified study areas and then subjected to cluster analysis using pH, alkalinity, water colour, specific conductance, sulphate, chloride and calcium as key parameters. For both areas, division of the lakes into seven water quality cluster groups reduced intragroup variability to the greatest extent. In Nova Scotia, representative lakes from all seven cluster groups were selected and make up a monitoring network comprised of 44 lakes (Table 2). In Newfoundland, two of the clusters were comprised of lakes which were insensitive to acidification and thus were not considered for development of the monitoring network. A third cluster group comprised of lakes from the Great Northern Peninsula was also excluded as logistic problems made long term monitoring difficult. In an attempt to replace these sites, six dilute headwater lakes located on the high elevation plateau of Gros Morne National park were also included in the network. Thus the Newfoundland LRTAP Monitoring Network is comprised of 34 sites representative of five water quality cluster groups (Table 3).

The purpose of this report is to document the present water quality conditions of the 78 LRTAP monitoring lakes. This will provide a baseline water quality characterization from which future changes or trends can be identified. It is intended that these data will enable evaluation of the proposed target loadings and will also reflect changes in atmospheric deposition as industrial control strategies are implemented.

## Sampling Methodology and Quality Control

The LRTAP monitoring lakes are sampled by helicopter twice per annum during the spring and fall circulation periods. These sampling periods were selected because sampling a homogeneous water body is much easier and these periods often represent the annual extremes in water quality conditions. All water samples are collected by hand from the centre of the lake at a depth of 0.5 m. Samples are collected in bottles used exclusively for LRTAP programs and are analyzed for major ions, metals, nutrients and physical parameters (Table 4) by the Water Quality Branch laboratory in Moncton. The analytical methods employed are described in the Analytical Methods Manual (1981). The water chemistry data for the Nova Scotia and Newfoundland LRTAP lakes are presented in Appendices 1 and 2 respectively.

In a long term monitoring program it is essential that a comprehensive quality control program be developed to ensure that errors and/or bias introduced by the sampling and analytical protocols are minimized. A field quality control, quality assurance component was incorporated into the LRTAP monitoring program in 1984 in an attempt to identify and remedy potential sources of error. All sites in the monitoring program have been pinpointed on 1:50,000 topographic maps as well as photographed from the air, to ensure that there is no confusion over sampling location. In addition, these photographs provide a record of present anthropogenic activities in the basin. At each station profiles of water temperature and specific conductance are taken prior to sampling to ensure that the lake is not stratified. These in-situ measurements and field pH values can also be used as a check on the quality of laboratory measurements. The major component of the quality control program is the collection of triplicate samples at a minimum of 15% of the sites. For each sampling of the LRTAP network, triplicate samples are collected from seven Nova Scotian and five Newfoundland lakes. These triplicate sites are selected using a rotational schedule which is designed to include a quality control station for each water quality cluster group. The results of some of these triplicate samples have already been documented in a preliminary field quality assurance, quality control report (Arseneault and Howell, 1985).

## Results and Discussion

### Sampling Stations

Table 5 lists the LRTAP lake monitoring stations, their NAQUADAT numbers, latitudes, longitudes, elevations and lake surface areas. The Nova Scotia lakes are clustered in two distinct locations in southwestern Nova Scotia. Twenty-seven lakes are situated in Kejimkujik National Park and the additional seventeen sites are located near the coast in the vicinity of Yarmouth (Figure 1). The lakes in Kejimkujik National Park have limited anthropogenic activities and are protected from future development. The Yarmouth lakes are readily accessable and have varying degrees of anthropogenic activity. The thirty-four Newfoundland stations are widely dispersed, and with the exception of the Great Northern Peninsula cover the entire island (Figure 2). Nine of the lakes are located in Terra Nova National Park and six are located in Gros Morne National Park and are thus protected from future development. The additional 19 stations are located in remote locations, the majority of which are accessable only by air.

### Geology

The Nova Scotia LRTAP lakes are underlain by four different geological formations, two of which are common to both the Kejimkujik and the Yarmouth sites (Table 6). The dominant geology is the Goldenville formation of the Meguma series which is characterized by greywacke, quartzite, gneiss and minor slates. Twenty of the forty-four monitoring lakes are underlain by this formation, with eleven being situated in Kejimkujik National Park and nine in the Yarmouth area. The second-most dominant geological structure is the Halifax formation of the Meguma series which underlays ten of the monitoring lake basins. This formation is characterized by slates, schist and minor quartzites. A Middle Devonian granitic and allied rock formation occupies the western region of Kejimkujik National Park and underlays nine of the monitoring lake basins. Lakes in this geological zone include the most acidic of the Nova Scotia LRTAP lakes. The final geological formation, an Upper Silurian formation of quartzites with slate interbeds and volcanic rocks, occupies a region around Lake George in the Yarmouth area and underlies five of the monitoring lakes.

The Newfoundland LRTAP lakes are underlain by six geological formations with Devonian plutonic rocks being the dominant structure (Table 7). Twelve of the thirty-four lakes are underlain by Devonian granites, granodiorite, monzonite and quartz diorite and are found along the southern coast of Newfoundland or on the Baie Verte Peninsula. The six lakes located on the high elevation plateau of Gros Morne National Park are underlain by a Helikian formation of quartzo-feldspathic gneiss and schist and amphibolite. The nine Terra Nova National Park lakes have Cambrian or late Hadrynian geology characterized by siltstones, slates, conglomerate, greywacke and acidic to mafic volcanic rocks. Three sites are underlain by an Ordovician formation comprised of limestone, siltstone, sandstone, dolomite and shales. As would be expected, Wigwam Pond which has the highest total alkalinity of the Newfoundland monitoring sites is underlain by this formation. Three ponds are underlain by a Silurian formation of sandstone, conglomerate, greywacke, shale and limestone and the final site near Adies Pond is situated in a Carboniferous formation of conglomerate, sandstone, siltstone, shale, limestone, gypsum and coal.

## Water Temperature

Box and Whisker diagrams presented in Figures 3 and 4 indicate median, upper and lower quartile and minimum and maximum water temperatures of the Nova Scotia and Newfoundland lakes respectively. Water temperatures ranged from 8°C to 15°C in the Nova Scotia lakes and from 2°C to 15°C for the Newfoundland lakes. The Yarmouth lakes (lakes 1-17) had median water temperatures which were slightly higher than values observed for the inland lakes located in Kejimkujik National Park. This is to be expected as areas in close proximity to the coast characteristically exhibit moderated air temperatures. Water temperatures in the Newfoundland lakes are lower than those observed in Nova Scotia presumably as a result of cooler spring and fall weather and short summers. The lowest water temperatures were observed for lakes located on the west coast at both moderate (#1) and high (#2, 3, 4, 5, 9) elevations. The coldest median water temperature (5°C) was observed in Wigwam Pond (#1) which is a deep lake situated at an elevation of 500 m. The coldest individual water temperatures ($<2^{\circ}C$) were observed in three high altitude ($\geq 1000$ m) lakes situated in Gros Morne National Park.

## Specific Conductance

Lakes in Atlantic Canada are characteristically dilute and as would be expected this is reflected by low specific conductance. The lakes in Nova Scotia have specific conductivities ranging from 21 uS/cm to 110 uS/cm (Figure 5) with the highest values observed near the coast. Figure 6 indicates that while the marine aerosol influence is significant at the coast, the effect on specific conductance diminishes rapidly as one moves inland. In fact, there is a good linear relationship between specific conductance and the logarithm of distance from the coast. The fact that the Kejimujik lakes fit this linear relationship indicates that even though these lakes are as far inland as possible for Nova Scotia (≈50 km) they are still influenced by marine aerosols. Ogden (1982) has shown a similar relationship between chloride concentration and distance from the sea for lakes in Nova Scotia. In addition to elevated average specific conductance, lakes near to the coast also exhibit higher variability presumably in response to variable meteorological conditions.

The Newfoundland lakes with the exception of Wigwam Pond tend to be more dilute than the Nova Scotian monitoring sites. Average specific conductance ranges from 14 uS/cm to 56 uS/cm (Figure 7). The lowest conductivities are observed for lakes located on the west (Lakes #'s 2, 3, 4, 5, 6, 9) and south coasts (Lake #'s 28, 29, 30, 31, 32, 34) of Newfoundland. The sites with the highest conductivities are either inland sites with elevated calcium and bicarbonate concentrations or Terra Nova National Park lakes which have moderately higher sodium and chloride concentrations. From Figure 6 it is readily apparent that coastal lakes in Newfoundland show little marine aerosol effect. A possible explanation for this observation, is that although these lakes are located near to the coast, they are situated at high altitudes and thus marine influence is minimized. In fact the only Newfoundland lakes which show moderate marine influence are the coastal, low elevation lakes located on the eastern coast of the island.

## Water Colour

Water colours of the Nova Scotia lakes (Figure 8) are highly variable, with mean values ranging from 5 to 180 Hazen units. Even though Brenton Lake in the Yarmouth area has the highest median water colour, the Kejimkujik lakes tend to be more highly coloured than the Yarmouth lakes. The clearwater lakes exhibit the least variation while the coloured sites are highly variable. The highly organic systems generally have higher water colours in the fall than in the spring in response to increased flushing of bog drainages following summer low flow conditions. The clear to moderately coloured lakes exhibit a different seasonal pattern with the highest water colours observed during the spring. It appears that water colour of these lakes is under hydrologic control and is less dependent on the seasonal dynamics of organic acid production in the bogs. Thus in systems with minimal bog influences, increased runoff during the spring results in increased supply of coloured organic matter.

The Newfoundland lakes are moderately coloured (Figure 9) with median values ranging from 5 to 140 Hazen units. In general, water colours of the Newfoundland lakes are lower than those observed in Nova Scotia and only one site has a median water colour greater than 100 Hazen units (#13). In contrast, ten lakes in Nova Scotia have median water colours which exceed 100 Hazen units. As was apparent for the Nova Scotia lakes, the more highly coloured Newfoundland lakes exhibited the greatest water colour variability. However, there is no obvious seasonal pattern of water colour for either the coloured or the clearwater lakes. This lack of water colour seasonality is probably a consequence of the variable seasonal precipitation and runoff pattern which is characteristic of Newfoundland. The only consistent pattern apparent for the Newfoundland lakes is that water colours during the 1985 sampling were with few exceptions lower than those observed for previous years. These reduced values are also likely a reflection of changes in the seasonal precipitation and runoff pattern.

Water colour is generally well correlated with dissolved organic carbon, particularly in sites which have high concentrations of allochthonously produced organic matter. Figures 10 and 11 indicate that there is a close relationship between water colour and DOC for both the Nova Scotia and Newfoundland lakes respectively. The regression equations for these relationships indicate that colourless waters in this region would be expected to have 2.0 to 2.5 mg/L of DOC.

## Ionic Composition

The percent anion and cation equivalent composition of the Nova

Scotia LRTAP lakes are presented in Tables 8 and 9 respectively. The dominant cation is sodium which comprises 52 to 68 percent of the sum of cations. The secondmost important cation alternates from calcium to magnesium except in the highly acidic Kejimkujik lakes where hydrogen ion equivalent concentrations are greater than either of the divalent cations. Hydrogen ions make up .05 to 25 percent of the sum of cations. The sum of cations ranged from 0.168 meq/L to 0.831 meq/L with the highest values observed for the coastal stations.

As would be expected the dominant anion is chloride which comprises 50 to 76 percent of the sum of anions. Although sulphate (MTB) is with only one exception the secondmost important anion, it is probable that the MTB technique gives an indication of the organic anion concentration in addition to the actual sulphate concentration. The actual percent composition of sulphate, as measured by ion chromatography, ranges from 11.4 to 30.5% and is generally the secondmost dominant anion. Bicarbonate (0 to 24.1%) and organic anions (0 to 25.6%), estimated from the difference between sulphate-MTB and sulphate-IC, each replace sulphate on 3 occasions as the secondmost important anion. The percent organic anions calculated using the empirical relationship of Oliver et al. (1983) are also presented and range from 6.2 to 55.2 percent of the sum of anions. These percentages are much greater than those calculated from the difference between the two sulphate methods. It is probable that the Oliver relationship gives an estimate of the potential organic anion, which includes both the ionic and complexed forms. The sum of anions range from .161 meq/L to 0.820 meq/L.

The percent anion and cation composition of the Newfoundland LRTAP lakes are presented in Tables 10 and 11 respectively. The sum of cations are with one exception low, ranging from .099 meq/L to 0.550 meq/L. Cation dominance was variable for the Newfoundland sites, with 26 of the lakes being sodium dominated while the other 8 were dominanted by calcium. The eight calcium dominated sites are all located in regions which are underlain by limestone and sandstones while the other sites tended to be in areas underlain by granite and in close proximity to the ocean. Percent sodium values ranged from 15.5 up to 61.2 percent while calcium had a range of 12.7 to 70.7 percent. Magnesium concentrations range from 12.9 to 38 percent and often replace calcium as the second-most dominant cation. At one site (Upper Indian Pond) on the Baie Verte Peninsula the cationic order of dominance is magnesium (38%), sodium (32%) and then calcium (27%). Potassium was relatively unimportant (0.8 to 6.9%) and was on seven occasions exceeded by hydrogen. Hydrogen ion concentrations ranged from .01 to 7.1 percent of the sum of cations.

The sum of anions for the Newfoundland lakes ranged from .087 meq/L to .508 meq/L. The anionic dominance was variable, with 7 sites being bicarbonate dominated and the additional 27 lakes being dominated by chloride. The percent composition ranged from 0.0 to 73 percent for bicarbonate and 18.3 to 71.9 percent for chloride. The thirdmost dominant anion alternated between sulphate (IC) (8.3-28.6%) and organic anion calculated from the difference between the two sulphate measurements (0 to 39.8%). As was observed for the Nova Scotia lakes the percent organic anion calculated according to Oliver et al. (1983)

was much greater than the value calculated from sulphate, ranging from 6.1 to 89 percent of the sum of anions.

## pH

Median pH values for the Nova Scotia lakes ranged from 4.4 to 6.7 with the highest values being observed in the coastal lakes located near Yarmouth (Figure 12). In general, the Kejimkujik lakes tended to have lower pH values than observed for the Yarmouth lakes, with the lowest values found in the highly coloured lakes. The pH variability is low, having a quartile range of approximately 0.5 pH units for the Kejimkujik lakes and 0.7 pH units for the higher pH Yarmouth lakes. Average pH values for the Newfoundland lakes ranged from 5.1 to 7.4, with the highest values being observed in lakes in the interior or on the east coast (Figure 13). The lowest pH values were observed in high elevation lakes in Gros Morne National Park and on the south coast. Although there is some indication of low pH values in the more highly coloured lakes (i.e. lake #13, 32) this pattern is much less pronounced than it is for the Nova Scotia lakes. Variability of pH in the Newfoundland lakes is similar to that observed in Nova Scotia, with quartile ranges of approximately 0.5 pH units. Similar to Nova Scotia, the highest pH variability is generally observed for the higher pH sites.

## Alkalinity

The carbonate-bicarbonate system plays and important role in governing the pH of aquatic systems in Atlantic Canada. Machell _et al_.

(1985) have shown that there is a bimodal pH distribution for Nova Scotian lakes with few sites at 5.4 and modes at 5.0 and 6.0. This indicates that lakes in this region are under the control of not only the carbonate-bicarbonate system but another buffering system as well. In lakes with no carbonate-bicarbonate alkalinity and pH values less than 5.6, metals such as aluminum and weak organic acids with their anions may also be involved in buffering the system. These sites may in fact be strongly buffered at pH levels lower than 5.6. Although the extent of buffering by metals and weak acid anions cannot be quantified the small pH variability observed for these acidic waters indicates the strength of these buffering systems. This implies that the lack of measured total alkalinity in a system can be used as an indication of previous acidification but not as a measure of sensitivity or buffering capacity. In fact, lakes which have very low, positive total alkalinity values and pH values circa 5.6 are probably more sensitive to further acidification than low pH, negative alkalinity sites.

Median alkalinity concentrations for the Nova Scotia LRTAP lakes are low, ranging from -2.5 to 6.8 mg $CaCO_3$/L (Figure 14). As would be expected the highest alkalinities are observed in the Yarmouth lakes which also have the highest pH values. However despite their proximity to the coast, many of the Yarmouth sites have average alkalinities below 1 mg/L. Two of these sites (Brenton L. and Snarl L.) exhibit low pH values and no alkalinity suggesting that they have undergone acidification. However, as these two lakes are both highly coloured, much of the acidification is likely to be a consequence of allochthonous production of organic acids. The Kejimkujik lakes have little carbonate buffering capacity with the majority of sites having average Gran alkalinities which are negative. As was observed for pH and water colour, alkalinity variability is extremely low for those sites which have chronically reduced concentrations and somewhat greater for the Yarmouth lakes which have the highest alkalinities.

Total alkalinity concentrations in Newfoundland are also low but in general are higher than values observed in Nova Scotia (Figure 15). Median alkalinities range from -.3 mg/L to 18.5 mg/L with the highest value found in Wigwam Pond on the west coast. In general the lowest alkalinities were observed for sites located at high elevation in Gros Morne National Park or along the south coast. The highest alkalinities were observed for inland and east coast lakes and these sites also exhibited the highest alkalinity variability. Although the majority of the Newfoundland sites still have measurable alkalinity, the preponderance of low values indicates that lakes in this region are also sensitive to acidification.

## Excess Calcium and Magnesium

The sum of the concentrations of sea-salt corrected calcium and magnesium has been used in acidification models such as the Henriksen model (1980), to indicate pre-acidification alkalinity. Although the validity of this approach is somewhat in question, it is useful to compare excess calcium and magnesium concentrations between and within lakes.

Median excess calcium and magnesium concentrations in the Nova Scotia lakes ranged from 0.02 meq/L to 0.18 meq/L, with the highest values being observed in the Yarmouth lakes (Figure 16). Without exception the dominant excess base cation is calcium, with many of the lakes, particularly the Kejimkujik sites, having extremely low or no non-marine supply of magnesium. Median concentrations for the Yarmouth lakes were all greater than 0.05 meq/L while only three of the Kejimkujik sites exceeded this level. These extremely low median values for the Kejimkujik sites are inversely proportional to the sensitivity of these lake basins to acidification. The Yarmouth lakes exhibit much greater inter and intra lake variability indicating that geological deposits of calcareous materials are rather basin specific. The greatest intra-lake variability of excess calcium and magnesium concentration is observed in those sites with the highest median concentrations.

The Newfoundland lakes exhibit a greater range of median excess calcium and magnesium concentrations than observed for the Nova Scotia lakes (Figure 17). The lowest median concentration of .018 meq/L was measured for a high altitude lake in Gros Morne National park while the highest concentration of 0.44 meq/L was observed in Wigwam Pond. The highest concentrations were observed for lakes located in the interior of the province while the lowest values were observed for the high altitude Gros Morne lakes and the lakes situated on the south coast of the island. The lakes with the high excess calcium and magnesium are all underlain by bedrock geology which is characterized by sandstone, siltstone and limestone deposits. The lakes with excess calcium and magnesium concentrations which are lower than 0.04 meq/L are with few exceptions underlain by granite, gneiss, schist and foliated granites. The intra lake variability of excess calcium and magnesium follows a pattern similar to that observed for the Nova Scotia lakes, with the sites with high median concentrations having the largest quartile ranges.

## Sulphate

Sulphate is considered to be a relatively conservative ion in aquatic systems and thus is a useful surrogate of hydrogen ion deposition. Although nitrogen oxides can also be significant sources of acidification, nitrates, nitrites and ammonia concentrations are biologically mediated and thus are difficult to use as tracers. For this reason, acidification models (Henriksen 1980; Thompson, 1982) and target loading estimates (United States-Canada Memorandum of Intent, 1983) are generally based on non-marine origin sulphate concentrations or fluxes.

Colourimetric sulphate determination using the methyl thymol blue (MTB) indicator is susceptable to interference by organic anions in highly coloured systems and thus overestimates the actual sulphate concentration (Cheam _et al_., 1985). However, the ability to achieve reasonable ion balances in coloured waters using MTB sulphate suggests that this method gives a measure of organic anion concentration in addition to the actual sulphate concentration. Thus the MTB sulphate concentration provides an indication of the degree of acidification of a basin as a result of both anthropogenic and natural acid loading. Sulphate concentrations as measured by ion chromatography (IC) are organic anion independent and give a reliable measure of the actual sulphate concentration. Thus, the sulphate (IC) concentration can be used as an indicator of anthropogenic loading of strong mineral acids. An estimate of the organic anion concentration can be obtained by taking the difference between the two sulphate concentrations (i.e. $A^- = \Delta SO_4 = SO_4MTB - SO_4IC$). Thompson (1985) refers to the $\Delta SO_4$ concentration as a measure of soluble reactive organic anions (SRA) and has applied these values to cation denudation rate (CDR) model predictions for Atlantic Canada.

It is of some interest to note that $\Delta SO_4$ concentrations do not agree well with organic anion concentrations predicted from the empirical model of Oliver et al. (1983). In fact, without exception the LRTAP monitoring lakes have much lower $\Delta SO_4$ concentrations than Oliver derived organic anion values (see Tables 8 and 10). Although it is not possible to determine which of these two methods gives the more accurate estimate of organic anion concentration, there is some evidence which supports the use of $\Delta SO_4$. The analytical technique used by Oliver et. al. (1983) to derive the empirical relationship between organic anions, DOC and pH involved the stripping of cations from the organic complex and the removal of these cations from the sample by ion exchange. The resultant organic anions were then taken to a salt and titrated with a strong acid. This methodology resulted in removal of both divalent (Ca, Mg) and trivalent (Fe, Al) cations from the organic complex and thus the empirical relationship gives an estimate of the potential rather than the actual organic anion concentration. This is supported by the fact that if organic anions are included into the sum of anions, it is necessary to include iron and aluminum concentrations in the sum of cations to maintain charge balance. Clair and Komadina (1984) have indicated that less than 5% of the aluminum in highly coloured waters is found in labile form, a finding which is supported by the apparent lack of aluminum toxicity to biota in these systems. Presumably iron in these highly organic systems is also associated with organic matter. Thus, it appears that a percentage of the Oliver calculated organic anion (ie. $\simeq$ Al + Fe) is in complexed rather than ionic form. Another obvious difficulty with the Oliver organic anion estimation is that colourless lake, river and even precipitation samples have approximately 2-3 mg/L of DOC which equates to about 0.020 meq/L of organic anion. It is likely that this DOC actually represents labile carbon compounds, rather than organic anions.

The colourimetric method for determination of sulphate concentration, using methyl thymol blue indicator, relies on the precipitation of barium sulphate at low pH and measurement of the remaining MTB indicator at high pH. This MTB concentration is equivalent to the lost barium and in theory the sulphate concentration. In highly coloured waters available organic anion binding sites can complex with available $Ba^{++}$ ions and thus the MTB sulphate method appears to measure not only sulphate concentration but also the organic anion concentration. Prior to analysis, the sample is passed through an ion exchange column to remove any cations which may interfere with the analytical technique. If the ion exchanger was strong enough to remove both the divalent and trivalent cations complexed with organic anions, then the $\Delta$ $SO_4$ concentration should equal the Oliver organic anion concentrations. However it is probable that the ion exchange process can remove the divalent but not the trivalent (Al, Fe) cations from the organic complex. This is supported by the fact that charge balances are obtained for coloured waters using MTB sulphate as a measure of sulphate and organic anions providing aluminum and iron are excluded from the sum of cations. Further evidence is provided by Figure 17a which indicates that the difference between the Oliver estimated organic anions and the $\Delta$ sulphate concentration are generally equivalent to the aluminum and iron concentrations. Thompson (1986) compared the estimated and actual alkalinities of selected samples from the Atlantic Region and observed that the apparent organic buffering was lower than the titratable Oliver $A^-$ but roughly equivalent to the titratable SRA ( $\Delta SO_4$).

Excess sulphate (MTB) for the Nova Scotian lakes had median concentrations ranging from 0.03 meq/L up to 0.10 meq/L with the highest values observed in the highly coloured lakes (Figure 18). The greatest in-lake variability was also observed for the highly coloured systems, apparently in response to variable organic anion loading. Sulphate (IC) concentrations for sites with water colours greater than 30 (Figure 19) coupled with sulphate (MTB) concentrations for lakes with colours less than 30, indicate that sulphate concentrations in Nova Scotia have a definite geographical distribution. The Yarmouth lakes have the highest excess sulphate concentrations, with median values ranging from 0.045 meq/L to .062 meq/L. The Kejimkujik sites have, with only one exception, excess sulphate concentrations ranging from .020 meq/L to

.042 meq/L with the majority of values near the .03 meq/L level. The one obvious anomaly is Snake Lake which has a low excess sulphate concentration of .010 meq/L. The second lowest median excess sulphate was recorded (.020 meq/L) for McGinty Lake which is located near to Snake Lake. Although these two sites have an underlying geology which is similar to many of the other sites, they are unique in that the majority of the lake shoreline is bordered by bogs. This suggests that the bogs may be influencing the seasonal cycling of sulphate within these two lake basins. Regardless of these two basins, the overall geographical pattern of excess sulphate concentration is in line with the expected sulphate deposition gradient for Nova Scotia. Based on average excess sulphate concentrations and an annual precipitation rate of approximately 1 m/yr, sulphate export of 25 kg/ha.yr and 15 kg/ha.yr would be predicted for Yarmouth and Kejimkujik respectively. This approximate sulphate export for Yarmouth agrees well with annual sulphate deposition calculated from rural Nova Scotia precipitation data by Underwood et al. (in press) but the Kejimkujik value is slightly lower. However, the estimated Kejimkujik export agrees with the value calculated by Freedman et al. (1986) using 1981 to 1983 Kejimkujik CANSAP data. Excess sulphate (MTB) concentrations in the Newfoundland lakes exhibit much less variability than observed for the Nova Scotia sites, presumably due to reduced organic anion concentrations. Median sulphate concentrations ranged from .018 meq/L to .070 meq/L with the highest value observed in a highly coloured lake situated on the Baie Verte Peninsula (Figure 20). As was observed for the Nova Scotia lakes, the greatest in-lake variability was found in those sites which have appreciable water colours. Excess sulphate (IC) concentrations for lakes with water colours greater than 30 Hazen units (Figure 21) and sulphate (MTB) concentrations for sites with water colours less than 30 range from .010 meq/L to .038 meq/L. It is interesting to note that the excess sulphate (IC) concentrations for the coloured lakes are without exception lower than the sulphate (MTB) concentrations for the colourless sites. In fact the median sulphate (IC) concentrations ranged from .01 meq/L to .018 meq/L while the median sulphate (MTB) from clear water lakes ranged from .018 meq/L to .035 meq/L. As Howell and Pollock (1986) have shown that there is no significant difference between sulphate (IC) and sulphate (MTB) concentrations in waters with colours less than or equal to 20 Hazen units, it appears that the drainage basins of the organic systems may be acting as net sulphur sinks. This apparent sulphate storage is supported by the results of Kramer _et_ _al_. (in prep.) who reported lower sulphate outputs than wet sulphate deposition for lakes in Newfoundland and Labrador. This pattern was not readily apparent in the Nova Scotia lake data, except for two adjacent lakes (Snake and McGinty) located in Kejimkujik National Park. Based on an average sulphate concentration of .020 meq/L and an approximate annual precipitation rate of 1500 mm/yr, the estimated sulphate export for Newfoundland is 15 kg/ha.yr. This estimated export is slightly lower than the sulphate deposition given by Scruton (1983) for Newfoundland and by Underwood _et_ _al_. (1986) for Cape Breton, Nova Scotia. Although these estimated sulphate exports calculated from the Nova Scotia and Newfoundland LRTAP lakes data appear reasonable, they must be used with caution as the limited seasonal chemistry and discharge data and no consideration of the effects of lake water residence time impart large standard errors. In Nova Scotia, the estimated exports follow the expected deposition gradient while in Newfoundland the export is slightly higher than the deposition gradient would suggest. As both lake sulphate concentrations and alkalinity deficits reflect the present deposition gradient, it is probable that the present monitoring network can be used to indicate aquatic chemistry response to changing atmospheric deposition.

## Alkalinity, pH, Sulphate and Cation Interactions

The fact that the Yarmouth lakes exhibited characteristically higher pH values than were observed for the Kejimkujik lakes can only be partially explained by the effects of marine aerosols. Although marine derived alkalinity must exhibit some control over the observed pH values, the elevated excess calcium and magnesium concentrations observed in the Yarmouth lakes indicates that these drainage basins have significantly greater geological deposits of calcareous materials than the Kejimkujik lakes. This is particularly noticeable for Doctor lake and lake Milo which have high pH values despite the fact that they are highly coloured. Thus even though these sites are influenced by organic acids, the geological deposits of calcareous materials within the basin are sufficient to buffer the natural organic acids. In contrast to this, Brenton lake and Snarl lake have little drainage basin calcareous material as indicated by lower excess calcium and magnesium concentrations and are therefore unable to buffer the natural organic acidity. As a consequence of this these two sites have no alkalinity and exhibit reduced pH values.

Values for pH for the Nova Scotian lakes exhibited some seasonality with many of the lakes having lower values (≃ 0.3 pH units) during the spring. These patterns were apparent for both clear and highly coloured sites with low values of alkalinity. As would be expected, the majority of the Nova Scotian lakes also exhibited a similar seasonal pattern for total alkalinity. The fact that only a few of the lakes exhibit spring reductions in excess calcium and magnesium concentrations, suggests that the alkalinity reductions are not entirely due to high runoff dilution effects. Thus it appears that in general, these lakes are experiencing increased acidification in the spring resulting in a reduction of alkalinity in the highly buffered sites and a loss of alkalinity and subsequent pH reductions in those lakes with low alkalinity. The seasonal pattern of water colour indicates that the natural acidity of the coloured basins is reduced during the spring suggesting that the lower pH and alkalinity values are not a consequence of increased loading of natural acids. Although reduced pH and alkalinity in the spring is characteristic of snowmelt and high runoff periods, excess sulphate and nitrate concentrations are not consistent with this pattern. In fact, sea-salt corrected sulphate (IC) and nitrate concentrations exhibited no obvious seasonal patterns. This suggests that the underlying mechanisms which control these seasonal patterns are extremely complex involving not only the physical effects of mixing water masses but also changes in chemical equilibria. In the low to moderately coloured sites, water colours in the spring are often greater than those observed in the fall and thus the reduced pH and alkalinities in those sites may be a consequence of increased loading of organic acids.

Seasonal patterns of pH and alkalinity are much more poorly defined in the Newfoundland lakes than in the Nova Scotia sites. Obvious pH patterns were observed in only nine of the thirty-four lakes sampled. Eight of these nine lakes are situated on the west coast of the island and had spring pH values which were generally 0.3 pH units lower than values observed in the fall. The ninth site is located on the Baie Verte Peninsula and is the most highly coloured of the Newfoundland lakes. Water colour in this lake was generally higher in the spring than the fall and thus increased natural acidity may explain the observed spring pH depression. The other eight lakes have low to moderate water colours and thus it appears that these sites are experiencing moderate acidification from anthropogenic sources. As would be expected those sites which have depressed spring pH values generally exhibit a loss of alkalinity during the same period. A few Newfoundland lakes had reduced spring alkalinity concentrations but exhibited no seasonality in pH values. In all of these cases, the reduced alkalinities are accompanied by reduced concentrations of excess calcium and magnesium, suggesting that the apparent alkalinity loss is a consequence of dilution during high flow conditions.

Assuming that the excess calcium and magnesium concentrations provide a reasonable indication of pre-acidification alkalinity, the difference between excess calcium and magnesium concentration and alkalinity can be used as an indicator of the relative degree of acidification. Figure 22 indicates that without exception, the Nova Scotia lakes appear to have lost some alkalinity. The median values range from a low of 0.01 meq/L up to 0.10 meq/L with the highest values observed for the Yarmouth lakes. In general the Yarmouth lakes have an alkalinity deficit of .050 to .060 meq/L while the Kejimkujik lakes have lost approximately .040 meq/L of original alkalinity. These apparent alkalinity losses must be viewed with some caution as unacidified basins with gypsum deposits will also show alkalinity deficits. However, the geological structure of this part of Nova Scotia and the uniformity of the alkalinity deficits for the Yarmouth and the Kejimkujik lakes would suggest that any gypsum influence is minimal. Thus it appears that the Nova Scotia lakes have undergone some degree of acidification as a consequence of both natural and anthropogenic acid loading. The highly coloured lakes would be expected to show alkalinity deficits due to naturally occurring organic acids. However the loss of alkalinity observed in the clearwater lakes, indicates that strong mineral acidity is also contributing to the acidification of Nova Scotian lakes. The higher alkalinity deficits observed for the Yarmouth lakes are consistent with the fact that somewhat higher atmospheric sulphur deposition is expected at the coast than at the inland stations. The higher median excess sulphate concentrations (IC) observed for the Yarmouth stations also indicate that lakes in this region are receiving greater atmospheric loads of sulphur. A possible difficulty in the interpretation of these data is that in areas which have geological mineralized slate formations, weathering of naturally occurring pyrites may be contributing to the natural acidity of the system. However as deposits of pyrites have patchy distributions and the rate of weathering is dependent on exposure by anthropogenic activities, the rather uniform median excess sulphate concentrations observed in Yarmouth and Kejimkujik would suggest that this process is not a significant contributor to the acidification of these basins.

Given the principle of charge balance, it would be expected that the excess MTB sulphate concentration should equal the alkalinity deficit. Although this is true for the clear lakes, the highly coloured sites appear to have more sulphate and organic anions than expected from the alkalinity deficit. Figure 23 presents the relationship between measured $H^+$ ion concentration and the $H^+$ ion concentration calculated from gran alkalinity and indicates that for the coloured negative alkalinity sites, gran alkalinity underestimates the hydrogen ion concentration by 10-20 ueq/L. This suggests that the highly coloured sites are buffered by the organic compounds which would explain the poor agreement between excess sulphate and the alkalinity deficit.

The Newfoundland lakes generally exhibit less alkalinity loss than is observed in Nova Scotia, with median values ranging from 20 to 70 ueq/L and averaging approximately 30 ueq/L (Figure 24). Thus it appears that the Newfoundland lakes have been acidified to a lesser degree than the Nova Scotia monitoring lakes. The MTB sulphate concentrations range from 18 to 65 ueq/L and as would be expected, agree well with the alkalinity deficits. Although much of the alkalinity loss in the highly coloured lakes is due to natural organic acids, the fact that the clearwater lakes have alkalinity deficits of approximately 30 ueq/L indicates that mineral acid loading is also involved. The slightly lower alkalinity deficits and excess sulphate (IC) concentration observed in the Newfoundland lake are consistent with the expected gradient of atmospheric deposition.

## Heavy Metals

Acidification of aquatic systems is often accompanied by elevated heavy metal concentrations, many of which are toxic to aquatic biota. Much attention has been focussed on aluminium which is mobilized from the terrestrial basin under low pH conditions, and in ionic form is extremely toxic.

Median aluminium concentrations for the Nova Scotian lakes are highly variable, ranging from .02 to .32 mg/L with 21 of the 44 lakes having values about 0.10 mg/L (Figure 25). Figure 26 indicates that there is a good relationship between water colour and extractable aluminium for the Nova Scotian lakes which suggests that much of the aluminium is complexed with organic ligands. In an aluminium speciation study by Clair and Komadina (1984) using coloured waters from the Kejimkujik National Park, it was found that approximately 95% of the aluminium is in complexed form. In general the colourless waters had extractable aluminium concentrations below 0.10 mg/L suggesting that labile aluminium concentrations don't exceed 0.10 mg/L. Cronan and Schofield (1979) in laboratory studies with brook trout observed sublethal effects at aluminium concentrations of 0.100 to 0.300 mg/L. However, as aluminium toxicity is dependent on both concentration and chemical form, it appears unlikely that the present aluminium concentrations observed in the Nova Scotia lakes are resulting in toxic effects on aquatic biota. Median aluminium concentrations for the Newfoundland lakes ranged from 0.02 to 0.30 mg/L, with 16 of the 34 sites having values above .10 mg/L (Figure 27). As was observed for the

Nova Scotia lakes the highest aluminium concentrations were observed in the highly coloured lakes, suggesting that much of the aluminium is complexed with organic matter (Figure 28).

Median concentrations of extractable iron in the Nova Scotia lakes tend to be highest in highly coloured waters (Figure 29). However this pattern is less pronounced than observed for aluminium, especially for the Kejimkujik lakes which have only slight iron variability despite large water colour differences. The median iron concentrations range from 0.03 to 0.65 mg/L with the highest values found in three coloured lakes in Yarmouth. The Kejimkujik lakes have rather stable iron concentrations, with median values ranging from .05 to .25 mg/L. Median iron concentrations for the Newfoundland lakes were slighly lower than observed in Nova Scotia, ranging from .02 to .41 mg/L (Figure 30). As was apparent for extractable aluminium, iron concentrations were generally highest in sites with elevated water colours.

Concentrations of manganese, lead, copper, zinc and cadmium were also measured but with few exceptions were found at levels close to the limit of detection. These data are presented in Appendix 1 and 2.

## Henriksen Nomograph

The Henriksen nomograph (1980) was developed based on the principle that acidification of freshwaters is analogous to a large scale bicarbonate system titration with strong mineral acid. This nomograph uses excess calcium and magnesium as an indicator of pre-acidification alkalinity and excess sulphate to indicate the degree of acidification. Henriksen cautions that it is necessary to assume that weathering of calcium and magnesium remains constant regardless of the rate of acidification and that the acidification is due to strong acids.

Figures 31 and 32 present the nomographs for the Nova Scotia LRTAP lakes using sulphate (MTB) and sulphate (IC) concentrations respectively. The use of MTB sulphate data expands the Henriksen plot along the absicca as this colourimetric technique includes both the actual sulphate concentration plus the organic anion concentration. Although Henriksen cautions against the use of nomograph in coloured waters due to the presence of weak organic acids, Table 12 indicates that the predicted nomograph pH values are with few exceptions close to the actual measured values. This suggests that it is possible to use the Henriksen nomograph to predict the pH of coloured waters, providing a colourimetric sulphate method which accounts for natural acidity is employed. However due to the large amount of scatter along the abcissa introduced by the natural organic acidity component, it is not possible to relate the predicted lake pH to the pH of precipitation. From Figure 31 there is a large amount of variability along the ordinate axis as well as the abcissa, with the Yarmouth lakes located in the bicarbonate region and the Kejimkujik lakes in the transition and acid zones.

The use of ion chromatographic sulphate concentration results in a more traditional looking Henriksen plot with less variability along the abcissa (Figure 32) than the ordinate. This is to be expected as sulphate IC concentration is an indicator of strong mineral acid loading and thus lakes in the same region should have rather similar sulphate concentrations and fluxes. Thus use of sulphate IC on the nomograph will enable an estimation of precipitation pH. The Yarmouth lake data is centered around a sulphate (IC) concentration of .055 ueq/L suggesting the precipitation in this region has a pH of approximately 4.55. This agrees well with the average precipitation pH values of 4.45 to 4.57 from 1977 to 1980 given by Underwood et al. (in press) for three stations in southwestern Nova Scotia. The Kejimkujik lake data centers around a sulphate (IC) concentration of 0.040 meq/L which indicates the pH of precipitation in this area should be about 4.7 This value is slightly higher than the 1977 to 1980 average value of 4.57 given by Underwood et al. (in press) for the Kejimkujik CANSAP station. However this projected pH agrees well with the 1984 median pH value of 4.7 given for the Kejimkujik CAPMON station (Vet et al., 1986).

Assuming that the use of MTB sulphate and IC sulphate concentrations in the Henriksen nomograph are valid, the results obtained from the two approaches can be combined to give an indication of the relative contribution of mineral and organic acidity to the observed lake pH. An example of this is given in Table 12 and indicates that H ion concentrations of lakes with colours less than 50 are generally due entirely to strong mineral acids, while in the more coloured lakes 21 to 78 percent of the hydrogen ion concentration may be due to natural organic acidity. Although it must be stressed that these values are only rough estimates, it is felt that this approach has some merit in indicating the relative importance of natural versus anthropogenic acidity of individual lakes which are in the acid or transition regions.

Figures 33 and 34 present the sulphate (MTB) and sulphate (IC) based Henriksen nomographs for the Newfoundland lakes respectively. As was observed for Nova Scotia the use of sulphate MTB data results in a large degree of variability along the abcissa due to the influence of organic acids. There is also a large amount of variability along the ordinate axis, with the majority of the data falling in the bicarbonate lakes and only three observations in the acid lake region. Using sulphate (IC) concentrations reduces the variability along the abcissa with the values centered around .015 meq/L which corresponds to a precipitation pH of approximately 4.8. This is slightly higher than the precipitation pH values given by Scruton (1983) but agrees well with the 1984 median values of 4.8 for Bay D'espoir or 4.9 for Cormack (Vet _et. al_., 1986).

As the Newfoundland lakes generally have pH values near to or above 5.3, it is not possible to estimate the relative role of natural and anthropogenic acidity in the acidification of aquatic systems in Newfoundland. However, the fact that the data on the sulphate (IC) based nomogram with only one exception fall in the bicarbonate region suggests that the present loading of mineral acids is not sufficient to cause large pH depressions.

## SUMMARY

The LRTAP monitoring lakes in Atlantic Canada are characteristically dilute, with major ion chemistry reflecting marine influence. This is particularly apparent in Nova Scotia where specific conductance is closely related to distance from the coast. Marine effects are less obvious for the Newfoundland lakes as elevation and surficial geology have significant effects on the major ion composition. The monitoring lakes have highly variable water colours with the highest values observed in the Kejimkujik National Park lakes. The highly coloured lakes tend to have the lowest pH and alkalinity concentrations in response to elevated organic acid loading. Some water colour seasonality was observed in Nova Scotia with the highest values observed during the autumn sampling period. There was no apparent water colour seasonality observed for the Newfoundland lakes which may reflect a different hydrologic regime. Values of pH and total alkalinity also exhibited some seasonal patterns with the lowest values observed during the spring for the coloured Nova Scotian lakes and the high elevation lakes on the west coast of Newfoundland.

Alkalinity deficits are approximately .050-.060 meq/L and .040 meq/L for the Yarmouth and Kejimkujik lakes respectively, while deficits for Newfoundland lakes are on average .030 meq/L. These alkalinity deficits agree with the expected deposition gradient for the region and indicate that these lakes have experienced some acidification. Although the apparent alkalinity deficits observed in the highly coloured lakes may be due to organic acidity, the clearwater lakes have also shown

alkalinity losses which indicate that anthropogenic mineral acid loading is also implicated.

Excess sulphate concentrations tend to agree with the observed alkalinity deficits, with the exception of the highly coloured sites in Nova Scotia. Sulphate (MTB) concentrations in these lakes tend to exceed the alkalinity deficits, suggesting that the organic compounds may be acting as buffers. Excess sulphate (IC) concentrations also appear to follow the deposition gradient, with estimated sulphate fluxes agreeing well with atmospheric sulphate deposition rates for Nova Scotia and Newfoundland.

The use of excess sulphate (MTB) concentrations in the Henrikson nomograph predicts pH values close to those observed, confirming that this sulphate method gives a good estimate of actual sulphate concentration in addition to organic anion concentration. These nomographs indicate that many of the Nova Scotia lakes are presently situated in the transition and acid lake regions while the Newfoundland sites are still in the bicarbonate lake zone. Henriksen plots which use sulphate (IC) concentrations do not in many cases predict the observed pH values, but give reasonable estimates of the present precipitation pH levels. Thus sulphate (IC) based Henriksen plots appear to remove the organic acidity effects and may provide a reasonable approach for estimating the relative contribution of organic and mineral acids to the acidification of aquatic systems.

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# LIST OF TABLES

Table 1. Site selection criteria for the Atlantic Region LRTAP Monitoring lakes

Table 2. Centroid values for the Nova Scotia LRTAP lakes water quality cluster groups

Table 3. Centroid values for the Newfoundland LRTAP lakes water quality cluster groups

Table 4. List of NAQUADAT parameter codes and Descriptions for the LRTAP monitoring program

Table 5. List of the station descriptions, NAQUADAT numbers, latitudes, longitudes, elevations and surface areas of the LRTAP monitoring stations

Table 6. Summary of the surficial geology underlying the Nova Scotia LRTAP monitoring lakes

Table 7. Summary of the surficial geology underlying the Newfoundland LRTAP monitoring lakes

Table 8. Percent composition of median anion concentrations for the Nova Scotia LRTAP lakes

Table 9. Percent composition of median cation concentrations for the Nova Scotia LRTAP lakes

Table 10. Percent composition of median anion concentrations for the Newfoundland LRTAP lakes

Table 11. Percent composition of median cation concentrations for the Newfoundland LRTAP lakes

Table 12. Henriksen predicted pH values for selected lakes in Kejimkujik National Park using sulphate (MTB) and sulphate (IC) concentrations, and estimates of the relative contribution of natural versus organic acids to the acidification of these sites

Table 1: Site Selection Criteria for the Atlantic region LRTAP Monitoring Lakes

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Headwater Lakes with maximum Basin size of 100 square km

Minimal Human Disturbance

Located in Sensitive Regions (Based on Clair et al.,1982)

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Table 2: Centroid Values for the Nova Scotia LRTAP Lakes Water Quality Cluster Groups

| Cluster Number | Number of Lakes | pH | Specific Conductance uS/cm | Water Colour | Sulphate mg/l | Chloride mg/l | Calcium mg/l | Total Alkalinity mg/l |
|---|---|---|---|---|---|---|---|---|
| 1 | 16 | 5.4 | 26 | 25 | 2.4 | 4.3 | 0.5 | 0.17 |
| 2 | 13 | 4.8 | 31 | 103 | 3.3 | 4.8 | 0.5 | 0.09 |
| 3 | 6 | 5.8 | 46 | 11 | 3.5 | 9.6 | 1.4 | 2.5 |
| 4 | 2 | 6.7 | 55 | 5 | 7.5 | 10.7 | 1.0 | 0.8 |
| 5 | 3 | 5.8 | 84 | 6 | 3.9 | 18.2 | 2.6 | 7.2 |
| 6 | 3 | 5.3 | 66 | 52 | 5.1 | 15.8 | 1.9 | 4.0 |
| 7 | 1 | 6.5 | 72 | 17 | 2.8 | 15.7 | 2.0 | 5.0 |

Table 3: Centroid Values for the Newfoundland LRTAP Lakes Water Quality Cluster Groups

| Cluster Number | Number of Lakes | pH | Specific Conductance uS/cm | Water Colour | Total Organic Carbon mg/l | Sulphate mg/l | Chloride mg/l | Calcium mg/l | Total Alkalinity mg/l |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 7 | 6.2 | 24 | 58 | 11. | 2.1 | 3.0 | 1.7 | 3.5 |
| 2 | 7 | 5.8 | 26 | 95 | 17. | 2.8 | 3.0 | 1.6 | 2.6 |
| 5 | 7 | 6.4 | 29 | 34 | 9. | 1.9 | 3.7 | 1.9 | 4.1 |
| 7 | 7 | 6.2 | 24 | 15 | 7. | 1.6 | 3.4 | 1.3 | 3.1 |
| Gros Morne | 6 | These Sites Where not Clustered | | | | | | | |

Table 4 : List of NAQUADAT Parameter Codes and Descriptions for the LRTAP Monitoring Program.

| PARAMETER CODE | PARAMETER DESCRIPTION |
|---|---|
| 02065S | Field Water Temperature - Meter |
| 02042S | Field Specific Conductance - Meter |
| 10301F | Field pH - Meter |
| 10301L | Laboratory pH |
| 02041L | Laboratory Specific Conductance |
| 02073L | Turbidity |
| 10101L | Total Alkalinity |
| 10110L | Gran Alkalinity |
| 02011L | Water Colour |
| 20110L | Dissolved Calcium |
| 12107L | Dissolved Magnesium |
| 19103L | Dissolved Potassium |
| 11103L | Dissolved Sodium |
| 17205L | Dissolved Chloride |
| 16304L | Dissolved Sulphate (MTB) |
| 16309L | Dissolved Sulphate (IC) |
| 15413P | Total Phosphorus |
| 29305P | Extractable Copper |
| 30304P | Extractable Zinc |
| 48302P | Extractable Cadmiun |
| 82302P | Extractable Lead |
| 13305P | Extractable Aluminium |
| 26304P | Extractable Iron |
| 25304P | Extractable Manganese |
| 06107L | Total Organic Carbon |
| 07110L | Dissolved Nitrogen NO3 & NO2 |
| 07601L | Total Nitrogen |
| 14102L | Reactive Silica |
| 09105L | Dissolved Fluoride |

Table 5 : List of Station Description,Naquadat Numbers,Latitudes,Longitudes
Elevations and Surface Areas of the LRTAP Monitoring Lakes

| | NAQUADAT NUMBER | STATION DESCRIPTION | LATITUDE | LONGITUDE | ALTITUDE M | LAKE AREA HA |
|---|---|---|---|---|---|---|
| 1 | 01NS01DA0002 | TEDFORD LAKE | 44 05 59 | 66 00 59 | 61 | 80 |
| 2 | 01NS01DA0003 | KILLIAMS LAKE | 44 00 02 | 66 04 55 | 30 | 120 |
| 3 | 01NS01DA0004 | CEDAR LAKE | 44 01 35 | 66 06 37 | 15 | 100 |
| 4 | 01NS01DA0005 | LOWER CORNINGS LAKE | 44 03 01 | 66 04 57 | 30 | 70 |
| 5 | 01NS01DA0006 | PIERCE LAKE | 44 07 09 | 66 05 49 | 35 | 40 |
| 6 | 01NS01DA0007 | COGGINS LAKE | 43 58 41 | 66 06 28 | 15 | 30 |
| 7 | 01NS01EA0002 | LAKE GEORGE | 44 00 00 | 66 03 59 | 46 | 1180 |
| 8 | 01NS01EA0004 | JESSE LAKE | 44 01 59 | 66 00 28 | 30 | 25 |
| 9 | 01NS01EA0005 | DOCTOR LAKE | 43 53 13 | 66 05 56 | 15 | 140 |
| 10 | 01NS01EA0009 | BRENTON LAKE | 43 57 41 | 66 04 09 | 30 | 50 |
| 11 | 01NS01EA0010 | TREFRY LAKE | 43 50 07 | 66 02 37 | 15 | 30 |
| 12 | 01NS01EA0011 | ALLENS LAKE | 43 56 47 | 66 09 10 | 15 | 100 |
| 13 | 01NS01EA0013 | LAKE MILO | 43 51 42 | 66 06 46 | 15 | 80 |
| 14 | 01NS01EA0014 | CHURCHILL LAKE | 43 59 26 | 66 08 21 | 15 | 50 |
| 15 | 01NS01EA0016 | DARLING LAKE | 43 58 05 | 66 07 16 | 15 | 140 |
| 16 | 01NS01EA0019 | SNARL LAKE | 44 06 20 | 65 58 31 | 61 | 60 |
| 17 | 01NS01EA0020 | BIRD LAKE | 43 58 23 | 65 56 39 | 61 | 30 |
| 18 | 01NS01ED0001 | BACK LAKE | 44 17 35 | 65 16 03 | 107 | 88 |
| 19 | 01NS01ED0002 | BIG DAM WEST LAKE | 44 27 33 | 65 17 30 | 107 | 110 |
| 20 | 01NS01ED0003 | BIG DAM EAST LAKE | 44 26 53 | 65 15 59 | 107 | 45 |
| 21 | 01NS01ED0004 | MOUNTAIN LAKE | 44 19 40 | 65 15 50 | 110 | 140 |
| 22 | 01NS01ED0005 | PESKOWESK LAKE | 44 19 00 | 65 16 58 | 107 | 780 |
| 23 | 01NS01ED0006 | GRAFTON LAKE | 44 23 08 | 65 10 39 | 91 | 260 |
| 24 | 01NS01ED0007 | KEJIMKUJIK LAKE | 44 22 09 | 65 13 13 | 91 | 2600 |
| 25 | 01NS01ED0008 | HIGH LAKE | 44 21 20 | 65 15 28 | 91 | 5 |
| 26 | 01NS01ED0010 | PEBBLELOGGITCH LAKE | 44 18 06 | 65 21 05 | 120 | 35 |
| 27 | 01NS01ED0011 | COBLIELLE LAKE | 44 19 00 | 65 13 58 | 120 | 140 |
| 28 | 01NS01ED0013 | BEN LAKE | 44 20 39 | 65 19 58 | 170 | 18 |
| 29 | 01NS01ED0014 | BIG RED LAKE | 44 20 58 | 65 22 58 | 152 | 80 |
| 30 | 01NS01ED0015 | MUD LAKE | 44 16 49 | 65 13 13 | 110 | 5 |
| 31 | 01NS01ED0016 | SNAKE LAKE | 44 21 24 | 65 12 23 | 91 | 8 |
| 32 | 01NS01ED0017 | LIBERTY LAKE | 44 23 08 | 65 25 35 | 137 | 80 |
| 33 | 01NS01ED0019 | FROZEN OCEAN LAKE | 44 27 07 | 65 20 43 | 107 | 250 |
| 34 | 01NS01ED0020 | CHANNEL LAKE | 44 25 00 | 65 18 33 | 91 | 70 |
| 35 | 01NS01ED0021 | LITTLE RED LAKE | 44 20 20 | 65 23 43 | 140 | 20 |
| 36 | 01NS01ED0022 | POPLAR LAKE | 44 21 15 | 65 26 19 | 152 | 80 |
| 37 | 01NS01ED0025 | LUXION LAKE | 44 22 00 | 65 20 34 | 137 | 60 |
| 38 | 01NS01ED0027 | BEAVERSKIN LAKE | 44 18 28 | 65 19 58 | 122 | 40 |
| 39 | 01NS01ED0028 | MCGINTY LAKE | 44 21 37 | 65 09 38 | 91 | 5 |
| 40 | 01NS01ED0029 | PESKAWA LAKE | 44 19 04 | 65 21 45 | 122 | 420 |
| 41 | 01NS01ED0030 | UPPER SILVER LAKE | 44 16 59 | 65 14 48 | 107 | 30 |
| 42 | 01NS01ED0043 | MOUNT TOM LAKE | 44 22 05 | 65 18 00 | 110 | 15 |
| 43 | 01NS01ED0047 | GEORGE LAKE | 44 20 26 | 65 13 13 | 91 | 95 |
| 44 | 01NS01ED0048 | LOON LAKE | 44 19 00 | 65 11 30 | 91 | 70 |

Table 5 : continued

| NAQUADAT NUMBER | | STATION DESCRIPTION | LATITUDE | LONGITUDE | ALTITUDE M | LAKE AREA HA |
|---|---|---|---|---|---|---|
| 45 | 01NF02YH0001 | WIGWAM POND | 49 24 30 | 57 37 30 | 381 | 90 |
| 46 | 01NF02YH0011 | UNNAMED POND(GMNP) | 49 33 40 | 57 43 25 | 670 | 10 |
| 47 | 01NF02YH0012 | UNNAMED POND(GMNP) | 49 31 20 | 57 42 45 | 750 | 5 |
| 48 | 01NF02YH0013 | UNNAMED POND(GMNP) | 49 35 50 | 57 43 55 | 725 | 45 |
| 49 | 01NF02YH0014 | UNNAMED POND (GMNP) | 49 26 20 | 57 31 45 | 670 | 45 |
| 50 | 01NF02YH0015 | UNNAMED POND(GMNP) | 49 27 40 | 57 31 15 | 500 | 68 |
| 51 | 01NF02YK0006 | NAMELESS POND (GLOVER ISLAND) | 48 47 45 | 57 39 35 | 351 | 130 |
| 52 | 01NF02YL0001 | UNNAMED POND EAST OF ADIES | 49 24 30 | 57 13 20 | 92 | 30 |
| 53 | 01NF02YL0010 | UNNAMED POND(GMNP) | 49 30 00 | 57 32 30 | 670 | 30 |
| 54 | 01NF02YM0001 | UNNAMED POND NEAR NOBLE POND | 49 49 05 | 55 54 05 | 198 | 10 |
| 55 | 01NF02YM0003 | UNNAMED POND (UPPER INDIAN POND) | 49 32 30 | 56 38 15 | 244 | 100 |
| 56 | 01NF02YM0006 | UNNAMED POND(MIDDLE ARM) | 49 44 30 | 56 10 00 | 275 | 60 |
| 57 | 01NF02YM0007 | UNNAMED POND(BURLINGTON) | 49 50 40 | 56 05 45 | 190 | 140 |
| 58 | 01NF02YN0008 | SANDY POND NEAR BUCHANS | 48 49 05 | 56 56 45 | 305 | 80 |
| 59 | 01NF02YO0007 | GULL LAKE | 48 56 05 | 55 21 50 | 198 | 110 |
| 60 | 01NF02YO0009 | TALLY POND | 48 36 35 | 56 29 30 | 290 | 300 |
| 61 | 01NF02YQ0001 | BELLMANS POND | 49 10 50 | 54 39 10 | 46 | 350 |
| 62 | 01NF02YR0005 | NAMELESS POND NEAR LITTLE OCEAN POND | 49 12 05 | 54 08 00 | 92 | 130 |
| 63 | 01NF02YS0003 | RATTLE POND | 48 31 00 | 53 49 30 | 31 | 30 |
| 64 | 01NF02YS0005 | SHALLOW POND | 48 30 00 | 53 50 00 | 46 | 5 |
| 65 | 01NF02YS0009 | OCHRE HILL POND | 48 30 00 | 53 58 00 | 153 | 3 |
| 66 | 01NF02YS0010 | CHATMAN POND WEST | 48 29 30 | 53 59 00 | 137 | 5 |
| 67 | 01NF02YS0016 | NAMELESS POND | 48 33 00 | 53 51 00 | 55 | 10 |
| 68 | 01NF02YS0021 | BOG POND | 48 29 30 | 54 08 00 | 198 | 10 |
| 69 | 01NF02YS0029 | LONG WATERS SOUTH | 48 27 30 | 54 03 30 | 137 | 30 |
| 70 | 01NF02YS0045 | JAY POND | 48 38 15 | 53 53 05 | 76 | 10 |
| 71 | 01NF02YS0048 | MOSSES COVE POND | 48 35 50 | 53 45 20 | 61 | 20 |
| 72 | 01NF02ZB0001 | BIG POND | 47 50 55 | 58 13 20 | 320 | 90 |
| 73 | 01NF02ZC0002 | NAMELESS POND(WHITE BEAR BAY) | 47 48 05 | 57 18 45 | 214 | 200 |
| 74 | 01NF02ZC0003 | STEPHENSONS POND | 47 54 45 | 57 29 45 | 366 | 120 |
| 75 | 01NF02ZD0001 | NAMELESS POND(DOLLAND BROOK) | 47 48 40 | 56 34 55 | 275 | 60 |
| 76 | 01NF02ZD0002 | NAMELESS POND(WOLF LAKE) | 48 04 30 | 56 41 35 | 275 | 5 |
| 77 | 01NF02ZF0003 | GISBOURNE LAKE | 47 50 05 | 54 49 15 | 168 | 170 |
| 78 | 01NF02ZF0004 | HUNGRY GROVE POND | 47 50 45 | 55 07 00 | 183 | 580 |

Table 6 : Summary of Surficial Geology Underlying the Nova Scotia LRTAP Monitoring Lakes.

| GOLDENVILLE FORMATION | HALIFAX FORMATION | MIDDLE DEVONIAN | UPPER SILURIAN |
|---|---|---|---|
| TEDFORD | KILLIAMS | HIGH | LAKE GEORGE |
| LOWER CORNINGS | CEDAR | BEN | JESSE |
| PIERCE | CHURCHILL | BIG RED | DOCTOR |
| COGGINS | BIG DAM EAST | LIBERTY | BRENTON |
| TREFRY | GRAFTON | LITTLE RED | MILO |
| ALLENS | KEJIMKUJIK | POPLAR | |
| DARLING | MUD | LUXION | |
| SNARL | CHANNEL | PESKAWA | |
| BIRD | McGINTY | MOUNT TOM | |
| BACK | GEORGE | | |
| BIG DAM WEST | | | |
| MOUNTAIN | | | |
| PESKOWESK | | | |
| PEBBLELOGGITCH | | | |
| COBLIELLE | | | |
| SNAKE | | | |
| FROZEN OCEAN | | | |
| BEAVERSKIN | | | |
| UPPER SILVER | | | |
| LOON | | | |

GOLDENVILLE-GREYWACKE,QUARTZITE,GNEISS,MINOR SLATE
HALIFAX-SLATE,SCHIST,MINOR QUARTZITE
MIDDLE DEVONIAN-GRANITIC AND ALLIED ROCKS
UPPER SILURIAN-QUARTZITE WITH SLATE INTERBEDS,VOLCANIC ROCKS

Table 7 : Summary of the Surficial Geology Underlying the Newfoundland LRTAP Monitoring Lakes

| DEVONIAN | ORDOVICIAN | HELIKIAN | SILURIAN | HADRYNIAN | CARBONIFEROUS |
|---|---|---|---|---|---|
| GLOVER ISLAND | WIGWAM | GROS MORNE | NOBLE POND | RATTLE | ADIES POND |
| UPPER INDIAN POND | BELLMANS | GROS MORNE | SANDY | SHALLOW | |
| BURLINGTON | LITTLE OCEAN POND | GROS MORNE | TALLY | OCHRE HILL | |
| MIDDLE ARM | | GROS MORNE | | NAMELESS | |
| GULL | | GROS MORNE | | JAY | |
| BIG | | GROS MORNE | | CHATMANS | |
| STEPHENSONS | | | | MOSSES COVE | |
| GISBOURNE | | | | | |
| HUNGRY GROVE | | | | | |
| DOLLAND BROOK | | | | | |
| WOLF LAKE | | | | | |
| WHITE BEAR BAY | | | | | |

DEVONIAN-GRANITE,GRANODIORITE,MONZONITE,QUARTZ DIORITE,SYENITE
HELIKIAN-QUARTZO-FELDSPATHIC GNEISS AND SCHIST,AMPHIBOLITE,PSAMMITIC TO PELITIC GNEISS
ORDOVICIAN-SILTSTONE,QUARTZITE,LIMESTONE,SLATE,GREYWACKE,SANDSTONE
SILURIAN-SANDSTONE,CONGLOMERATE,GREYWACKE,SHALE,LIMESTONE
HADRYNIAN-QUARTZITE,SILTSTONE,CONGLOMERATE,GREYWACKE,VOLCANIC ROCKS
CARBONIFEROUS-CONGLOMERATE,SANDSTONE,SILTSTONE,SHALE,LIMESTONE,GYPSUM,ANHYDRITE,COAL

Table 6 : Percent Composition of Median Anion Concentrations for the Nova Scotia LRTAP Lakes

| LAKE | PERCENT CHLORIDE | PERCENT SULPHATE (MTB) | PERCENT SULPHATE (IC) | PERCENT BICARBONATE | PERCENT ORGANIC (DELTA SO4) | PERCENT ORGANIC (OLIVER) | SUM OF ANIONS |
|---|---|---|---|---|---|---|---|
| 1 01NS01DA0002 | 67.9 | 19.8 | 18.6 | 12.3 | 1.16 | 7.67 | 0.357 |
| 2 01NS01DA0003 | 74.2 | 21.5 | 21.7 | 4.3 | 0.00 | 7.52 | 0.389 |
| 3 01NS01DA0004 | 69.5 | 20.3 | 19.1 | 10.2 | 1.18 | 11.55 | 0.486 |
| 4 01NS01DA0005 | 73.6 | 22.8 | 20.3 | 3.6 | 2.48 | 12.38 | 0.392 |
| 5 01NS01DA0006 | 73.3 | 22.3 | 22.2 | 4.3 | 0.16 | 10.94 | 0.370 |
| 6 01NS01DA0007 | 67.6 | 20.0 | 16.5 | 12.4 | 3.48 | 15.74 | 0.522 |
| 7 01NS01EA0002 | 75.6 | 22.2 | 23.1 | 2.2 | 0.00 | 6.79 | 0.379 |
| 8 01NS01EA0004 | 71.0 | 21.2 | 12.9 | 7.8 | 8.30 | 10.38 | 0.372 |
| 9 01NS01EA0005 | 66.0 | 22.4 | 14.6 | 11.6 | 7.77 | 24.27 | 0.589 |
| 10 01NS01EA0009 | 65.4 | 33.0 | 20.4 | 1.6 | 12.61 | 40.88 | 0.402 |
| 11 01NS01EA0010 | 69.4 | 19.9 | 17.9 | 10.6 | 2.03 | 11.15 | 0.511 |
| 12 01NS01EA0011 | 73.9 | 14.7 | 14.3 | 11.3 | 0.41 | 6.20 | 0.820 |
| 13 01NS01EA0013 | 67.9 | 18.8 | 12.7 | 13.3 | 6.13 | 18.48 | 0.661 |
| 14 01NS01EA0014 | 69.3 | 13.5 | 12.6 | 17.2 | 0.93 | 6.38 | 0.787 |
| 15 01NS01EA0016 | 69.5 | 15.6 | 16.4 | 14.9 | 0.00 | 10.38 | 0.599 |
| 16 01NS01EA0019 | 64.2 | 35.8 | 23.4 | 0.0 | 12.35 | 29.35 | 0.279 |
| 17 01NS01EA0020 | 61.9 | 22.2 | 23.0 | 15.8 | 0.00 | 6.38 | 0.375 |
| 18 01NS01ED0001 | 68.1 | 29.9 | 27.7 | 2.0 | 2.16 | 17.32 | 0.169 |
| 19 01NS01ED0002 | 63.8 | 35.2 | 19.3 | 1.0 | 15.91 | 37.63 | 0.205 |
| 20 01NS01ED0003 | 64.7 | 26.3 | 24.2 | 9.0 | 2.10 | 14.34 | 0.198 |
| 21 01NS01ED0004 | 69.6 | 30.4 | 27.8 | 0.0 | 2.59 | 16.05 | 0.161 |
| 22 01NS01ED0005 | 64.7 | 35.3 | 27.8 | 0.0 | 7.57 | 22.37 | 0.185 |
| 23 01NS01ED0006 | 65.5 | 24.1 | 20.2 | 10.4 | 3.88 | 20.83 | 0.230 |
| 24 01NS01ED0007 | 65.2 | 34.7 | 23.8 | 0.2 | 10.91 | 28.77 | 0.197 |
| 25 01NS01ED0008 | 62.1 | 37.9 | 20.8 | 0.0 | 17.09 | 38.56 | 0.179 |
| 26 01NS01ED0010 | 57.3 | 42.7 | 22.8 | 0.0 | 19.85 | 39.79 | 0.191 |
| 27 01NS01ED0011 | 71.7 | 28.3 | 27.4 | 0.0 | 0.87 | 11.51 | 0.159 |
| 28 01NS01ED0013 | 64.1 | 35.9 | 30.6 | 0.0 | 5.30 | 20.83 | 0.163 |
| 29 01NS01ED0014 | 50.4 | 49.6 | 20.5 | 0.0 | 29.12 | 55.22 | 0.211 |
| 30 01NS01ED0015 | 62.1 | 37.9 | 26.9 | 0.0 | 10.96 | 29.31 | 0.193 |
| 31 01NS01ED0016 | 60.5 | 39.5 | 11.4 | 0.0 | 28.12 | 55.04 | 0.172 |
| 32 01NS01ED0017 | 70.4 | 29.6 | 24.3 | 0.0 | 5.35 | 18.21 | 0.180 |
| 33 01NS01ED0019 | 61.3 | 38.7 | 22.2 | 0.0 | 16.51 | 39.11 | 0.194 |
| 34 01NS01ED0020 | 59.6 | 40.4 | 22.4 | 0.0 | 18.00 | 41.17 | 0.191 |
| 35 01NS01ED0021 | 52.4 | 47.6 | 22.0 | 0.0 | 25.59 | 51.25 | 0.195 |
| 36 01NS01ED0022 | 65.7 | 34.3 | 28.7 | 0.0 | 5.66 | 26.39 | 0.184 |
| 37 01NS01ED0025 | 62.3 | 37.7 | 28.9 | 0.0 | 8.86 | 26.46 | 0.182 |
| 38 01NS01ED0027 | 72.4 | 26.2 | 24.6 | 1.4 | 1.58 | 10.87 | 0.165 |
| 39 01NS01ED0028 | 50.6 | 25.3 | 15.5 | 24.1 | 9.83 | 35.64 | 0.207 |
| 40 01NS01ED0029 | 63.0 | 37.0 | 27.2 | 0.0 | 9.76 | 30.84 | 0.179 |
| 41 01NS01ED0030 | 63.2 | 28.5 | 26.0 | 8.3 | 2.50 | 14.48 | 0.180 |
| 42 01NS01ED0043 | 61.6 | 38.4 | 22.2 | 0.0 | 16.16 | 32.60 | 0.167 |
| 43 01NS01ED0047 | 65.6 | 34.4 | 24.4 | 0.0 | 9.99 | 30.14 | 0.194 |
| 44 01NS01ED0048 | 63.1 | 36.9 | 23.8 | 0.0 | 13.06 | 28.31 | 0.197 |

Table 9 : Percent Composition of Median Cation Concentrations for the Nova Scotia LRTAP Lakes.

| LAKE | PERCENT CALCIUM | PERCENT MAGNESIUM | PERCENT POTASSIUM | PERCENT SODIUM | PERCENT HYDROGEN | SUM OF CATIONS |
|---|---|---|---|---|---|---|
| 1 01NS01DA0002 | 19.5 | 20.4 | 3.2 | 56.7 | 0.16 | 0.368 |
| 2 01NS01DA0003 | 13.7 | 19.0 | 2.6 | 64.3 | 0.41 | 0.402 |
| 3 01NS01DA0004 | 20.4 | 19.1 | 2.2 | 58.1 | 0.20 | 0.530 |
| 4 01NS01DA0005 | 14.6 | 19.9 | 2.6 | 62.2 | 0.62 | 0.405 |
| 5 01NS01DA0006 | 13.4 | 21.0 | 2.4 | 62.7 | 0.55 | 0.385 |
| 6 01NS01DA0007 | 16.2 | 17.6 | 3.1 | 62.9 | 0.21 | 0.549 |
| 7 01NS01EA0002 | 13.2 | 19.2 | 2.5 | 64.6 | 0.52 | 0.384 |
| 8 01NS01EA0004 | 16.8 | 21.3 | 2.9 | 58.7 | 0.27 | 0.389 |
| 9 01NS01EA0005 | 20.7 | 17.9 | 3.2 | 58.1 | 0.14 | 0.650 |
| 10 01NS01EA0009 | 15.5 | 18.1 | 2.3 | 61.1 | 3.04 | 0.436 |
| 11 01NS01EA0010 | 17.8 | 16.9 | 2.6 | 62.5 | 0.16 | 0.511 |
| 12 01NS01EA0011 | 16.9 | 18.0 | 2.5 | 62.6 | 0.05 | 0.831 |
| 13 01NS01EA0013 | 20.8 | 17.6 | 3.3 | 58.3 | 0.09 | 0.709 |
| 14 01NS01EA0014 | 18.9 | 18.6 | 3.1 | 59.4 | 0.03 | 0.815 |
| 15 01NS01EA0016 | 15.8 | 17.3 | 2.9 | 63.9 | 0.08 | 0.631 |
| 16 01NS01EA0019 | 16.6 | 18.9 | 1.9 | 58.5 | 4.12 | 0.317 |
| 17 01NS01EA0020 | 20.3 | 25.1 | 1.9 | 52.5 | 0.11 | 0.398 |
| 18 01NS01ED0001 | 15.9 | 16.5 | 3.2 | 61.9 | 2.47 | 0.175 |
| 19 01NS01ED0002 | 16.1 | 16.0 | 2.5 | 61.3 | 4.08 | 0.229 |
| 20 01NS01ED0003 | 17.0 | 18.0 | 2.3 | 62.2 | 0.55 | 0.207 |
| 21 01NS01ED0004 | 12.4 | 16.5 | 2.8 | 64.7 | 3.60 | 0.172 |
| 22 01NS01ED0005 | 10.6 | 16.9 | 3.0 | 60.8 | 8.65 | 0.193 |
| 23 01NS01ED0006 | 18.7 | 18.1 | 2.0 | 60.7 | 0.46 | 0.246 |
| 24 01NS01ED0007 | 16.3 | 17.3 | 2.7 | 59.6 | 4.17 | 0.219 |
| 25 01NS01ED0008 | 12.5 | 17.0 | 2.6 | 60.8 | 7.07 | 0.203 |
| 26 01NS01ED0010 | 8.5 | 15.3 | 2.7 | 58.5 | 15.02 | 0.197 |
| 27 01NS01ED0011 | 12.1 | 16.8 | 2.8 | 65.8 | 2.57 | 0.168 |
| 28 01NS01ED0013 | 7.1 | 15.3 | 4.5 | 59.8 | 13.31 | 0.171 |
| 29 01NS01ED0014 | 6.1 | 13.5 | 3.1 | 52.0 | 25.23 | 0.224 |
| 30 01NS01ED0015 | 14.9 | 19.6 | 2.2 | 56.9 | 6.40 | 0.214 |
| 31 01NS01ED0016 | 17.4 | 17.7 | 1.3 | 55.4 | 8.24 | 0.196 |
| 32 01NS01ED0017 | 11.2 | 17.6 | 3.1 | 65.4 | 2.70 | 0.194 |
| 33 01NS01ED0019 | 14.1 | 16.8 | 3.0 | 59.4 | 6.66 | 0.214 |
| 34 01NS01ED0020 | 14.0 | 16.3 | 2.6 | 59.8 | 7.26 | 0.215 |
| 35 01NS01ED0021 | 7.7 | 13.6 | 2.9 | 54.7 | 21.17 | 0.220 |
| 36 01NS01ED0022 | 9.5 | 15.5 | 3.1 | 63.1 | 8.89 | 0.200 |
| 37 01NS01ED0025 | 8.3 | 15.4 | 3.4 | 62.7 | 10.24 | 0.195 |
| 38 01NS01ED0027 | 9.9 | 16.9 | 3.6 | 67.5 | 2.13 | 0.167 |
| 39 01NS01ED0028 | 25.9 | 18.9 | 2.0 | 52.7 | 0.50 | 0.221 |
| 40 01NS01ED0029 | 9.0 | 14.2 | 3.0 | 60.7 | 13.14 | 0.199 |
| 41 01NS01ED0030 | 17.7 | 16.5 | 3.0 | 62.0 | 0.81 | 0.185 |
| 42 01NS01ED0043 | 8.5 | 15.3 | 3.4 | 61.0 | 11.71 | 0.177 |
| 43 01NS01ED0047 | 15.3 | 17.0 | 2.8 | 60.0 | 5.08 | 0.215 |
| 44 01NS01ED0048 | 15.4 | 16.7 | 2.8 | 60.2 | 4.98 | 0.214 |

Table 10 : Percent Composition of Median Anion Concentrations for the Newfoundland LRTAP Lakes

| LAKE | PERCENT CHLORIDE | PERCENT SULPHATE (MTB) | PERCENT SULPHATE (IC) | PERCENT ORGANIC (OLIVER) | PERCENT ORGANIC (DELTA SO4) | PERCENT BICARBONATE | SUM OF ANIONS |
|---|---|---|---|---|---|---|---|
| 1 01NF02YH0001 | 18.3 | 8.7 | | 6.2 | | 72.97 | 0.508 |
| 2 01NF02YH0011 | 64.6 | 30.1 | | 15.7 | | 5.31 | 0.120 |
| 3 01NF02YH0012 | 54.1 | 28.2 | | 16.3 | | 17.70 | 0.113 |
| 4 01NF02YH0013 | 71.9 | 28.1 | | 6.9 | | 0.00 | 0.105 |
| 5 01NF02YH0014 | 61.1 | 38.9 | 23.3 | 34.0 | 15.55 | 0.00 | 0.089 |
| 6 01NF02YH0015 | 60.9 | 39.1 | 19.2 | 34.3 | 19.88 | 0.00 | 0.108 |
| 7 01NF02YK0006 | 28.8 | 23.1 | 11.4 | 32.1 | 11.61 | 48.10 | 0.213 |
| 8 01NF02YL0001 | 29.3 | 15.1 | 8.4 | 26.2 | 6.69 | 55.67 | 0.240 |
| 9 01NF02YL0010 | 65.5 | 34.5 | | 23.9 | | 0.00 | 0.102 |
| 10 01NF02YM0001 | 50.3 | 23.3 | 15.6 | 19.6 | 7.78 | 26.42 | 0.160 |
| 11 01NF02YM0003 | 31.0 | 32.6 | 16.0 | 48.7 | 16.61 | 36.31 | 0.122 |
| 12 01NF02YM0006 | 35.5 | 30.9 | 13.6 | 48.3 | 17.30 | 33.62 | 0.160 |
| 13 01NF02YM0007 | 40.8 | 50.8 | 11.1 | 89.1 | 39.77 | 8.43 | 0.163 |
| 14 01NF02YN0008 | 18.8 | 22.8 | 11.2 | 39.3 | 11.65 | 58.36 | 0.182 |
| 15 01NF02YD0007 | 35.4 | 26.0 | 13.7 | 43.1 | 12.30 | 38.60 | 0.152 |
| 16 01NF02YD0009 | 26.3 | 23.9 | 15.8 | 33.0 | 8.11 | 49.84 | 0.132 |
| 17 01NF02YQ0001 | 44.5 | 14.5 | 8.7 | 22.6 | 5.83 | 40.95 | 0.228 |
| 18 01NF02YR0005 | 63.3 | 31.6 | 12.3 | 40.8 | 19.33 | 5.05 | 0.158 |
| 19 01NF02YS0003 | 53.7 | 21.0 | 11.6 | 30.8 | 9.37 | 25.29 | 0.197 |
| 20 01NF02YS0005 | 52.6 | 22.8 | 11.8 | 39.2 | 11.02 | 24.53 | 0.188 |
| 21 01NF02YS0009 | 46.0 | 37.7 | 13.0 | 60.8 | 24.69 | 16.31 | 0.158 |
| 22 01NF02YS0010 | 41.2 | 32.1 | 11.0 | 62.2 | 21.11 | 26.73 | 0.173 |
| 23 01NF02YS0016 | 49.5 | 21.3 | 11.1 | 40.3 | 10.19 | 29.20 | 0.222 |
| 24 01NF02YS0021 | 47.0 | 30.3 | 18.6 | 55.2 | 11.76 | 22.66 | 0.110 |
| 25 01NF02YS0029 | 45.8 | 28.2 | 13.1 | 52.2 | 15.10 | 26.07 | 0.149 |
| 26 01NF02YS0045 | 48.0 | 27.7 | 10.4 | 52.9 | 17.28 | 24.30 | 0.208 |
| 27 01NF02YS0048 | 68.7 | 19.3 | 11.2 | 24.5 | 8.12 | 11.94 | 0.260 |
| 28 01NF02ZB0001 | 45.7 | 29.6 | 25.3 | 19.5 | 4.38 | 24.71 | 0.124 |
| 29 01NF02ZC0002 | 61.0 | 39.0 | 28.7 | 30.1 | 10.35 | 0.00 | 0.087 |
| 30 01NF02ZC0003 | 45.2 | 36.8 | 28.2 | 36.9 | 8.67 | 17.92 | 0.096 |
| 31 01NF02ZD0001 | 47.7 | 32.0 | 19.8 | 39.3 | 12.16 | 20.28 | 0.108 |
| 32 01NF02ZD0002 | 39.6 | 50.3 | 14.5 | 81.6 | 35.74 | 10.13 | 0.116 |
| 33 01NF02ZF0003 | 55.1 | 21.8 | 16.2 | 21.5 | 5.60 | 23.10 | 0.115 |
| 34 01NF02ZF0004 | 53.5 | 25.1 | 13.4 | 29.6 | 11.76 | 21.42 | 0.150 |
| 35 | | | | | | | |
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| 43 | | | | | | | |
| 44 | | | | | | | |

Table 11 : Percent Composition of Median Cation Concentrations for the Newfoundland LRTAP Lakes.

| LAKE | PERCENT CALCIUM | PERCENT MAGNESIUM | PERCENT POTASSIUM | PERCENT SODIUM | PERCENT HYDROGEN | SUM OF CATIONS |
|---|---|---|---|---|---|---|
| 1 01NF02YH0001 | 70.7 | 12.9 | 0.8 | 15.6 | 0.01 | 0.550 |
| 2 01NF02YH0011 | 19.9 | 20.2 | 3.4 | 54.6 | 1.92 | 0.126 |
| 3 01NF02YH0012 | 18.8 | 16.9 | 4.6 | 58.8 | 0.93 | 0.118 |
| 4 01NF02YH0013 | 12.7 | 18.1 | 3.6 | 60.8 | 4.88 | 0.112 |
| 5 01NF02YH0014 | 22.2 | 18.9 | 4.3 | 48.7 | 5.91 | 0.101 |
| 6 01NF02YH0015 | 20.2 | 18.3 | 4.5 | 50.9 | 6.09 | 0.117 |
| 7 01NF02YK0006 | 54.1 | 15.4 | 1.8 | 28.5 | 0.16 | 0.229 |
| 8 01NF02YL0001 | 48.6 | 14.0 | 1.6 | 35.7 | 0.10 | 0.257 |
| 9 01NF02YL0010 | 18.2 | 18.1 | 4.4 | 53.7 | 5.62 | 0.107 |
| 10 01NF02YM0001 | 23.2 | 22.5 | 3.3 | 50.6 | 0.34 | 0.158 |
| 11 01NF02YM0003 | 26.7 | 38.0 | 2.6 | 32.0 | 0.64 | 0.130 |
| 12 01NF02YM0006 | 46.4 | 16.3 | 5.1 | 31.9 | 0.40 | 0.189 |
| 13 01NF02YM0007 | 30.6 | 23.7 | 6.9 | 35.4 | 3.35 | 0.191 |
| 14 01NF02YN0008 | 64.7 | 13.6 | 1.4 | 20.0 | 0.28 | 0.205 |
| 15 01NF02YD0007 | 42.9 | 18.9 | 3.4 | 34.5 | 0.27 | 0.178 |
| 16 01NF02YD0009 | 50.4 | 19.1 | 1.9 | 28.3 | 0.33 | 0.136 |
| 17 01NF02YQ0001 | 32.9 | 23.9 | 2.6 | 40.5 | 0.14 | 0.244 |
| 18 01NF02YR0005 | 15.1 | 24.4 | 2.3 | 55.4 | 2.86 | 0.173 |
| 19 01NF02YS0003 | 29.5 | 17.8 | 2.6 | 49.8 | 0.24 | 0.222 |
| 20 01NF02YS0005 | 31.4 | 17.3 | 2.5 | 48.4 | 0.32 | 0.216 |
| 21 01NF02YS0009 | 28.6 | 17.4 | 2.5 | 50.1 | 1.39 | 0.175 |
| 22 01NF02YS0010 | 37.0 | 16.4 | 1.9 | 44.1 | 0.57 | 0.187 |
| 23 01NF02YS0016 | 35.0 | 15.9 | 2.2 | 46.7 | 0.21 | 0.262 |
| 24 01NF02YS0021 | 27.5 | 15.8 | 4.6 | 50.8 | 1.30 | 0.114 |
| 25 01NF02YS0029 | 40.7 | 15.9 | 2.7 | 40.1 | 0.55 | 0.161 |
| 26 01NF02YS0045 | 36.7 | 15.4 | 2.4 | 44.6 | 0.99 | 0.238 |
| 27 01NF02YS0048 | 19.1 | 16.0 | 3.3 | 61.2 | 0.37 | 0.283 |
| 28 01NF02ZB0001 | 32.8 | 15.7 | 2.7 | 47.0 | 1.80 | 0.111 |
| 29 01NF02ZC0002 | 18.1 | 18.3 | 2.8 | 53.7 | 7.11 | 0.099 |
| 30 01NF02ZC0003 | 30.6 | 16.5 | 3.3 | 48.3 | 1.39 | 0.101 |
| 31 01NF02ZD0001 | 31.7 | 17.4 | 3.5 | 46.2 | 1.17 | 0.115 |
| 32 01NF02ZD0002 | 37.1 | 15.0 | 1.9 | 41.9 | 4.15 | 0.135 |
| 33 01NF02ZF0003 | 26.9 | 13.8 | 3.6 | 55.2 | 0.55 | 0.129 |
| 34 01NF02ZF0004 | 31.9 | 16.9 | 2.9 | 47.7 | 0.65 | 0.172 |

Table 12 : Henriksen Predicted pH Values for Selected lakes in Kejimkujik National Park using Sulphate (MTB) and Sulphate (IC) Concentrations and Estimates of the Relative Contribution of Natural versus Organic Acids to the Acidification of these Sites.

| NAQUADAT NUMBER | STATION DESCRIPTION | MEDIAN WATER COLOUR | MEDIAN LAB PH | PREDICTED pH USING SO4 (MTB) | PREDICTED pH USING SO4 (IC) | TOTAL H+ | MINERAL ACID H+ PERCENT | ORGANIC ACID H+ PERCENT |
|---|---|---|---|---|---|---|---|---|
| 01NS01ED0001 | BACK LAKE | 10 | 5.4 | 5.3 | 5.3 | 0.0040 | 100 | 0 |
| 01NS01ED0002 | BIG DAM WEST LAKE | 95 | 5.1 | 5.0 | )5.3 | 0.0079 | | |
| 01NS01ED0003 | BIG DAM EAST LAKE | 7 | 6.0 | )5.3 | )5.3 | 0.0010 | | |
| 01NS01ED0004 | MOUNTAIN LAKE | 10 | 5.2 | 5.1 | 5.2 | 0.0063 | 100 | 0 |
| 01NS01ED0005 | PESKOWESK LAKE | 50 | 4.8 | 4.7 | 5.0 | 0.0158 | 63 | 37 |
| 01NS01ED0006 | GRAFTON LAKE | 25 | 6.0 | )5.3 | )5.3 | 0.0010 | | |
| 01NS01ED0007 | KEJIMKUJIK LAKE | 75 | 5.1 | 5.0 | 5.3 | 0.0079 | 63 | 37 |
| 01NS01ED0008 | HIGH LAKE | 90 | 4.9 | 4.8 | 5.4 | 0.0126 | 32 | 68 |
| 01NS01ED0010 | PEBBLELOGGITCH LAKE | 125 | 4.5 | (4.7 | 5.0 | 0.0316 | 32 | 68 |
| 01NS01ED0011 | COBLIELLE LAKE | 5 | 5.4 | 5.2 | 5.3 | 0.0040 | 100 | 0 |
| 01NS01ED0013 | BEN LAKE | 35 | 4.7 | (4.7 | 4.7 | 0.0200 | 100 | 0 |
| 01NS01ED0014 | BIG RED LAKE | 170 | 4.3 | ((4.7 | 4.7 | 0.0501 | 40 | 60 |
| 01NS01ED0015 | MUD LAKE | 65 | 4.9 | 4.8 | )5.3 | 0.0126 | | |
| 01NS01ED0016 | SNAKE LAKE | 125 | 4.8 | 5.0 | ))5.3 | 0.0158 | | |
| 01NS01ED0017 | LIBERTY LAKE | 15 | 5.4 | 5.0 | 5.3 | 0.0040 | 100 | 0 |
| 01NS01ED0019 | FROZEN OCEAN LAKE | 100 | 4.9 | 4.7 | )5.3 | 0.0126 | | |
| 01NS01ED0020 | CHANNEL LAKE | 110 | 4.8 | 4.7 | )5.3 | 0.0158 | | |
| 01NS01ED0021 | LITTLE RED LAKE | 140 | 4.4 | ((4.7 | 5.0 | 0.0398 | 25 | 75 |
| 01NS01ED0022 | POPLAR LAKE | 50 | 4.8 | 4.7 | 4.8 | 0.0158 | 100 | 0 |
| 01NS01ED0025 | LUXION LAKE | 55 | 4.8 | (4.7 | 4.7 | 0.0158 | 100 | 0 |
| 01NS01ED0027 | BEAVERSKIN LAKE | 5 | 5.5 | 4.9 | 5.2 | 0.0032 | 100 | 0 |
| 01NS01ED0028 | MCGINTY LAKE | 55 | 6.0 | ))5.3 | ))5.3 | 0.0010 | | |
| 01NS01ED0029 | PESKAWA LAKE | 70 | 4.6 | (4.7 | 4.8 | 0.0251 | 63 | 37 |
| 01NS01ED0030 | UPPER SILVER LAKE | 5 | 5.9 | 5.2 | 5.3 | 0.0013 | 100 | 0 |
| 01NS01ED0043 | MOUNT TOM LAKE | 85 | 4.7 | (4.7 | 4.9 | 0.0200 | 63 | 37 |
| 01NS01ED0047 | GEORGE LAKE | 75 | 5.1 | 5.0 | 5.4 | 0.0079 | 50 | 50 |
| 01NS01ED0048 | LOON LAKE | 70 | 5.1 | 4.8 | 5.4 | 0.0079 | 50 | 50 |

# LIST OF FIGURES

Figure 1. Location of the forty-four LRTAP monitoring lakes located in Nova Scotia

Figure 2. Location of the thirty-four LRTAP monitoring lakes located in Newfoundland

Figure 3. Box and Whisker diagram of water temperature for the Nova Scotia LRTAP lakes

Figure 4. Box and Whisker diagram of water temperature for the Newfoundland LRTAP lakes

Figure 5. Box and Whisker diagram of specific conductance for the Nova Scotia LRTAP lakes

Figure 6. Relationship between median specific conductance and air distance from the coast for the Nova Scotia and the Newfoundland LRTAP lakes

Figure 7. Box and Whisker diagrams of specific conductance for the Newfoundland LRTAP lakes

Figure 8. Box and Whisker diagrams of water colour for the Nova Scotia LRTAP lakes

Figure 9. Box and Whisker diagrams of water colour for the Newfoundland LRTAP lakes

Figure 10. Relationship between water colour and dissolved organic carbon concentration for the Nova Scotia LRTAP lakes

Figure 11. Relationship between water colour and dissolved organic carbon concentration for the Newfoundland LRTAP lakes

Figure 12. Box and Whisker diagram of laboratory pH for the Nova Scotia LRTAP lakes

Figure 13. Box and Whisker diagram of laboratory pH for the Newfoundland LRTAP lakes

Figure 14. Box and Whisker diagram of total alkalinity concentration for the Nova Scotia LRTAP lakes

Figure 15. Box and Whisker diagram of total alkalinity concentration for the Nova Scotia LRTAP lakes

Figure 16. Box and Whisker diagram of excess calcium and magnesium concentrations for the Nova Scotia LRTAP lakes

Figure 17. Box and Whisker diagram of excess calcium and magnesium concentrations for the Newfoundland LRTAP lakes

Figure 17a. Relationship between organic anions and delta sulphate and organic anions minus aluminum and iron versus delta sulphate for the Nova Scotia LRTAP lakes

Figure 18. Box and Whisker diagram of excess MTB sulphate concentrations for the Nova Scotia LRTAP lakes

Figure 19. Box and Whisker diagram of excess IC sulphate concentrations for the Nova Scotia LRTAP lakes with water colour values exceeding 30 Hazen units

Figure 20. Box and Whisker diagram of excess MTB sulphate concentrations for the Newfoundland LRTAP lakes

Figure 21. Box and Whisker diagram of excess IC sulphate concentrations for the Newfoundland LRTAP lakes with water colours exceeding 30 Hazen units

Figure 22. Box and Whisker diagram of alkalinity deficit (Ca* + Mg* - Alk) for the Nova Scotia LRTAP lakes

Figure 23. Relationship between measured hydrogen ion concentration and the hydrogen ion concentration estimated from negative gran alkalinity for the Nova Scotia LRTAP lakes

Figure 24. Box and Whisker diagram of alkalinity deficit (Ca* + Mg* - Alk) for the Newfoundland LRTAP lakes

Figure 25. Box and Whisker diagram of extractable aluminium concentrations for the Nova Scotia LRTAP lakes

Figure 26. Relationship between extractable aluminium concentration and water colour for the Nova Scotia LRTAP lakes

Figure 27. Box and Whisker diagram of extractable aluminium concentrations for the Newfoundland LRTAP lakes

Figure 28. Relationship between extractable aluminium concentrations and water colour for the Newfoundland LRTAP lakes

Figure 29. Box and Whisker diagram of extractable iron concentration for the Nova Scotia LRTAP lakes

Figure 30. Box and Whisker diagram of extractable iron concentrations for the Newfoundland LRTAP lakes

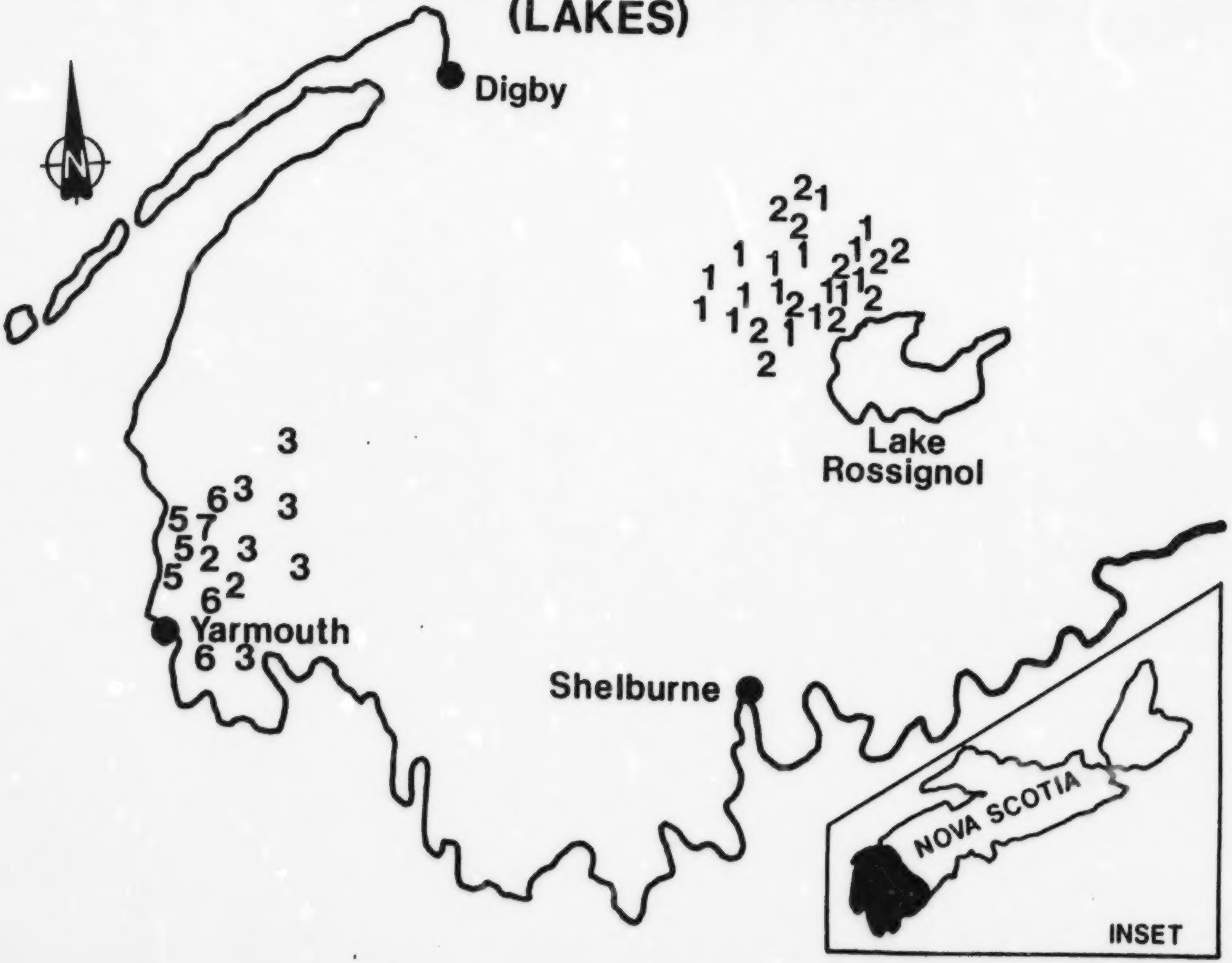
Figure 31. Henriksen nomograph for the Nova Scotia LRTAP lakes using MTB sulphate concentrations

Figure 32. Henriksen nomograph for the Nova Scotia LRTAP lakes using IC sulphate concentrations

Figure 33. Henriksen nomograph for the Newfoundland LRTAP lakes using MTB sulphate concentrations

Figure 34. Henriksen nomograph for the Newfoundland LRTAP lakes using IC sulphate concentrations

# SOUTHWEST NOVA SCOTIA LRTAP SAMPLING STATIONS (LAKES)


N
Digby
Lake Rossignol
Yarmouth
Shelburne
NOVA SCOTIA
INSET

# NEWFOUNDLAND LRTAP SAMPLING STATIONS (LAKES)

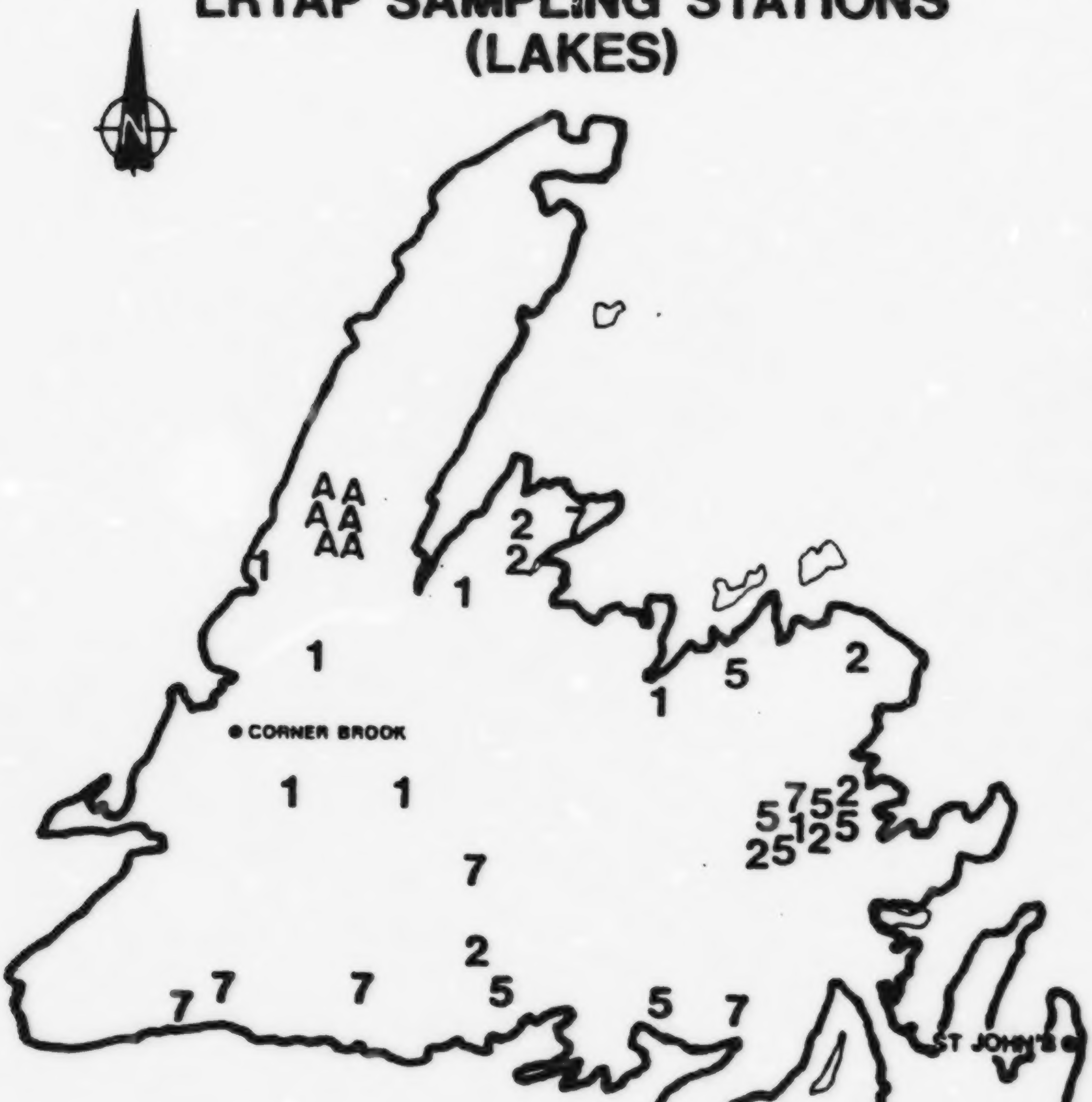

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FIGURE 3: BOX AND WHISKER DIAGRAM OF WATER TEMPERATURE FOR THE NOVA SCOTIA LRTAP LAKES

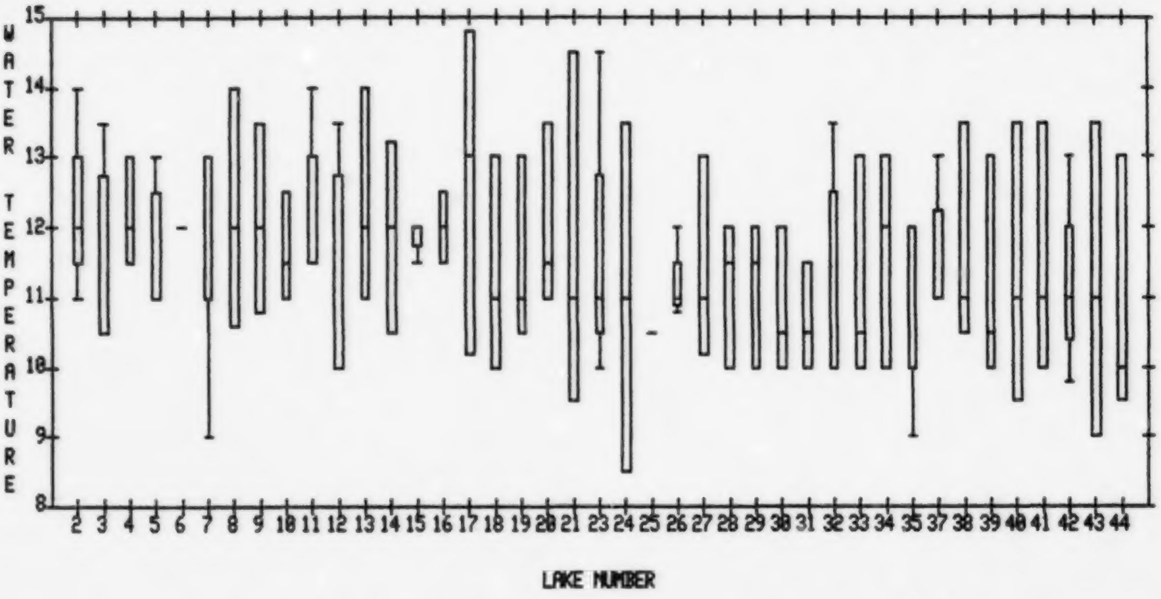


FIGURE 4 : BOX AND WHISKER DIAGRAM OF WATER TEMPERATURE FOR THE NEWFOUNDLAND LRTAP LAKES

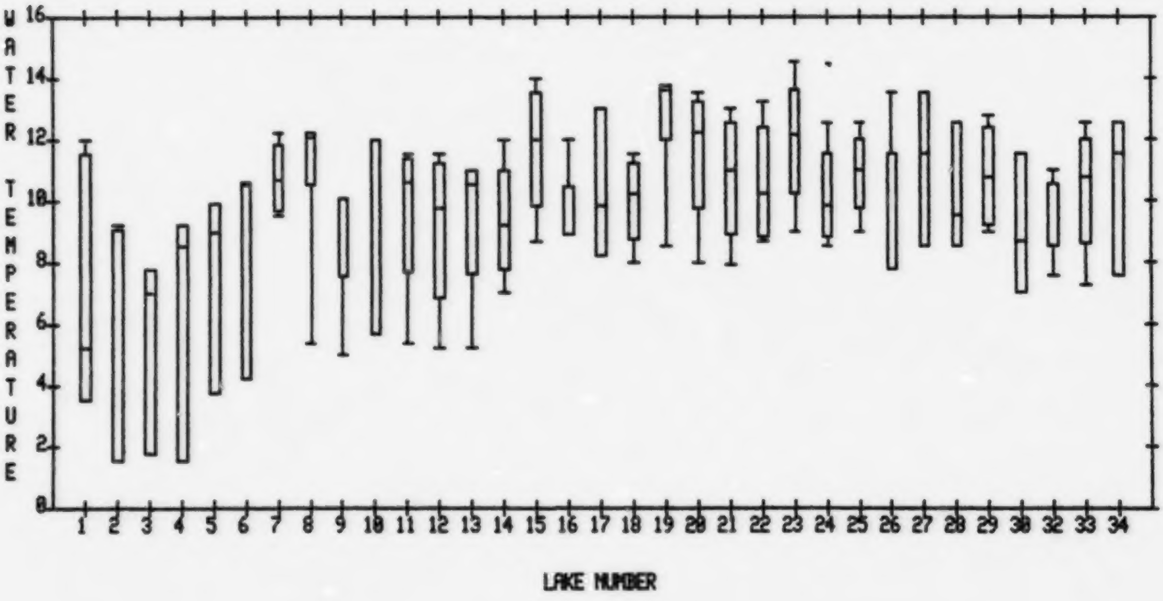


FIGURE 5: BOX AND WHISKER DIAGRAM OF SPECIFIC CONDUCTANCE FOR THE NOVA SCOTIA LRTAP LAKES

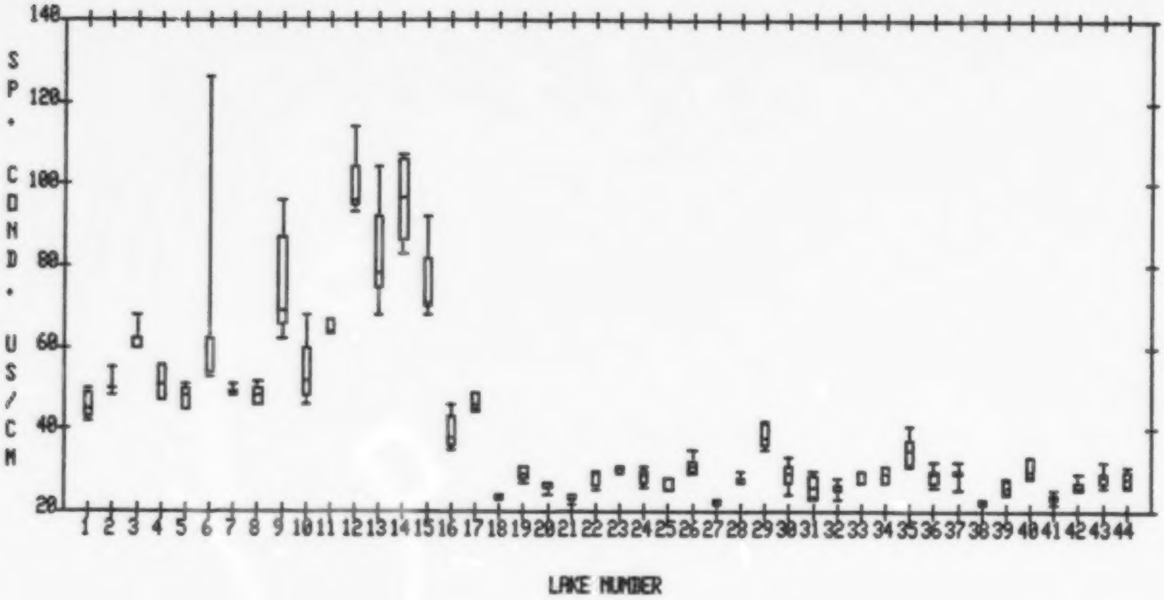


FIGURE 6: RELATIONSHIP BETWEEN MEDIAN SPECIFIC CONDUCTANCE AND AIR DISTANCE FROM THE COAST FOR THE NOVA SCOTIA AND THE NEWFOUNDLAND LRTAP LAKES.

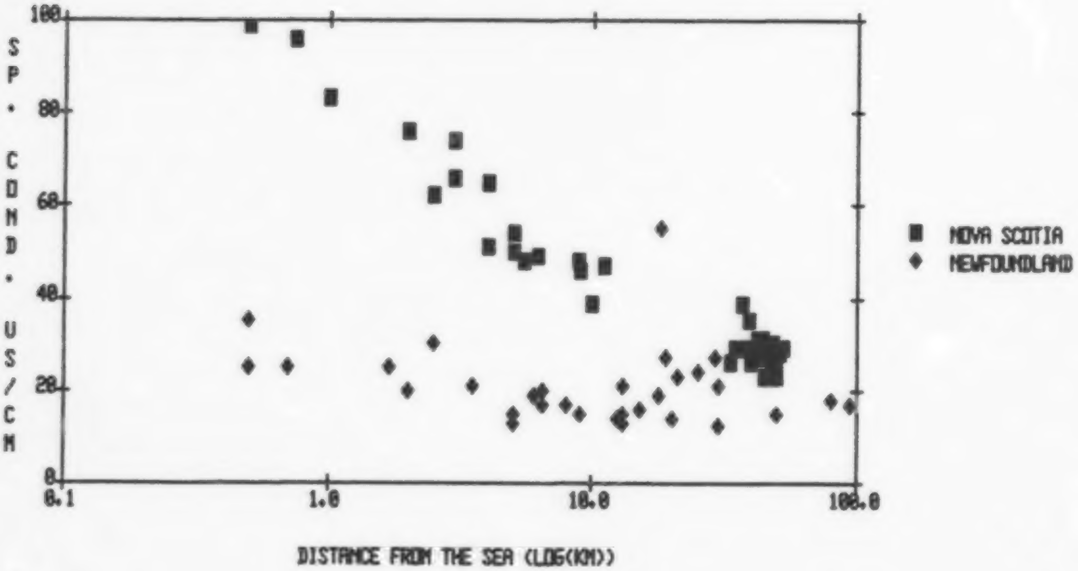


FIGURE 7: BOX AND WHISKER DIAGRAM OF SPECIFIC CONDUCTANCE FOR THE NEWFOUNDLAND LRTAP LAKES

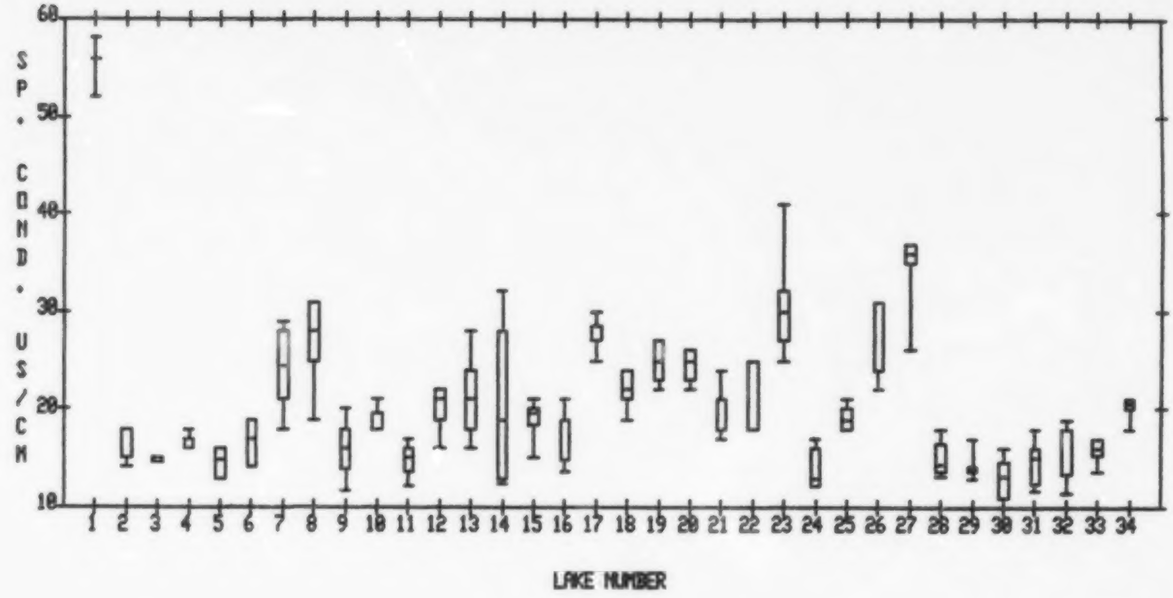


FIGURE 8: BOX AND WHISKER DIAGRAMS OF WATER COLOUR FOR THE NOVA SCOTIA LRTAP LAKES

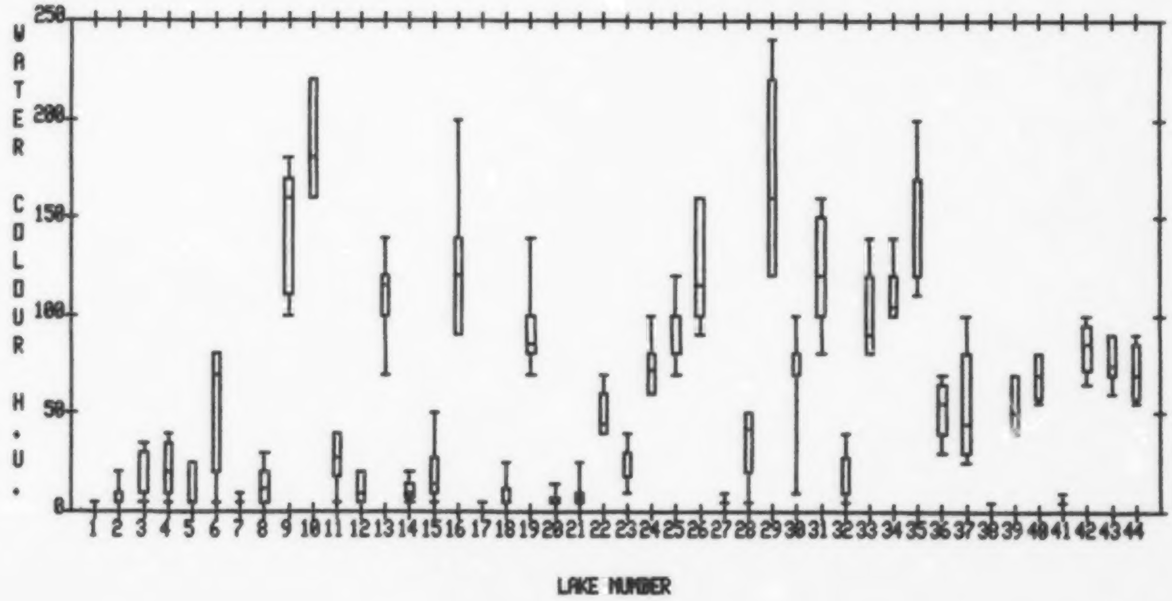


FIGURE 11: RELATIONSHIP BETWEEN WATER COLOUR AND DISSOLVED ORGANIC CARBON CONCENTRATION FOR THE NEWFOUNDLAND LRTAP LAKES

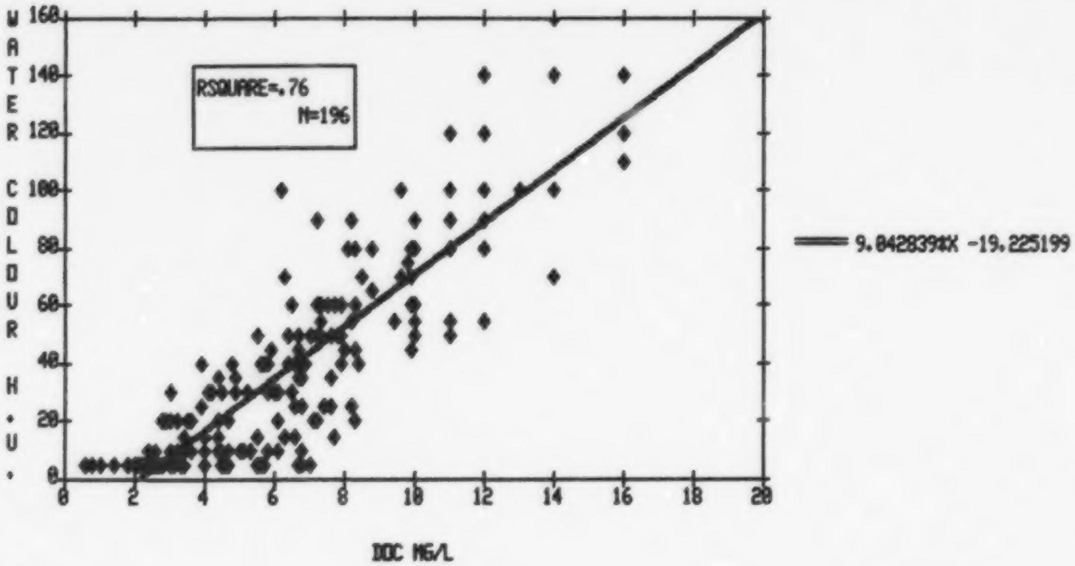


FIGURE 12: BOX AND WHISKER DIAGRAM OF LABORATORY PH FOR THE NEWFOUNDLAND LRTAP LAKES

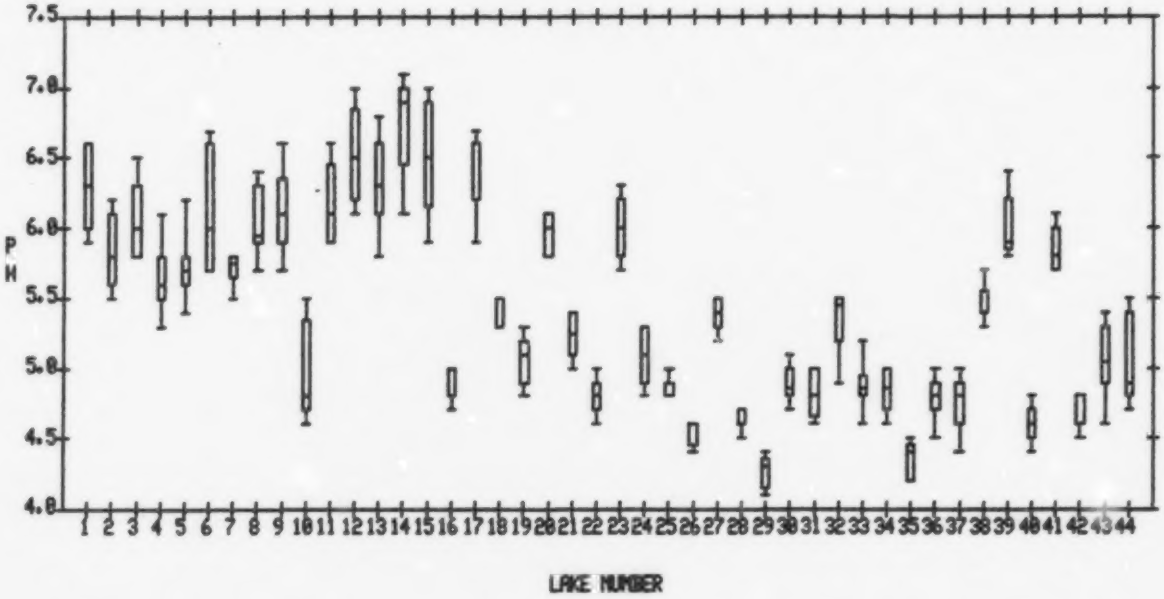


FIGURE 9: BOX AND WHISKER DIAGRAM OF WATER COLOUR FOR THE NEWFOUNDLAND LRTAP LAKES

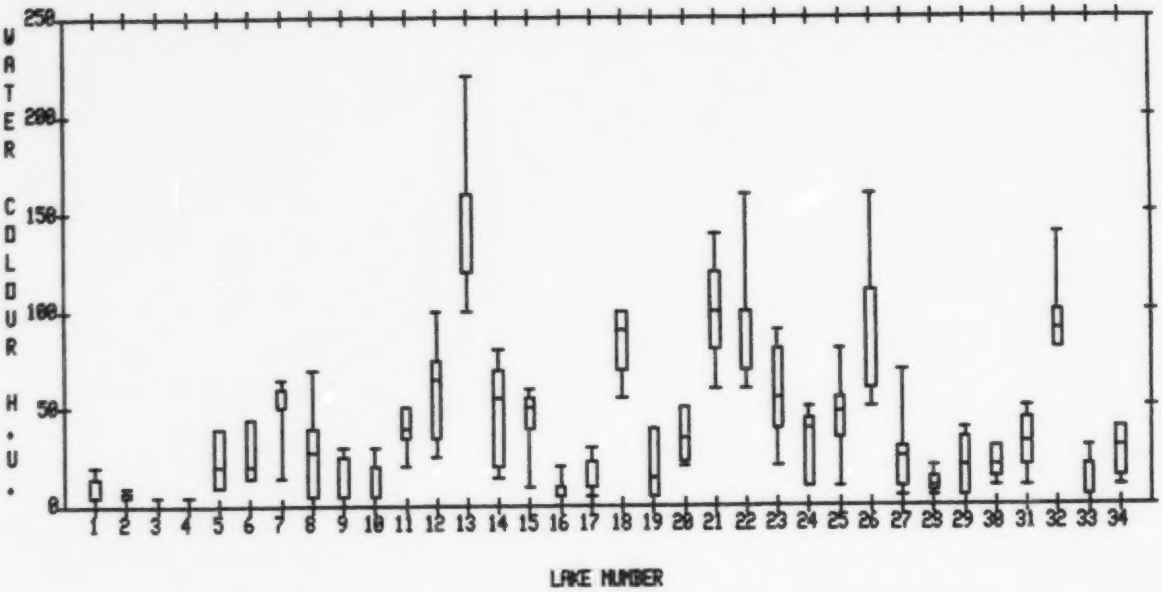


FIGURE 10: RELATIONSHIP BETWEEN WATER COLOUR AND DISSOLVED ORGANIC CARBON CONCENTRATION FOR THE NOVA SCOTIA LRTAP LAKES

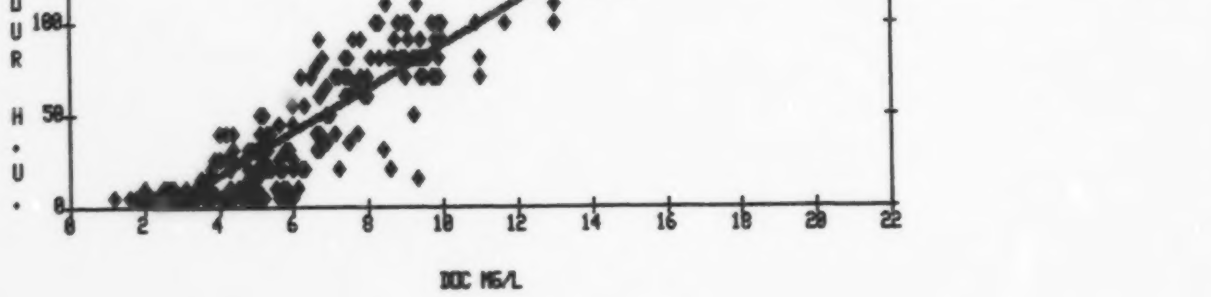


FIGURE 13: BOX AND WHISKER DIAGRAM OF LABORATORY PH
FOR THE NEWFOUNDLAND LRTAP LAKES

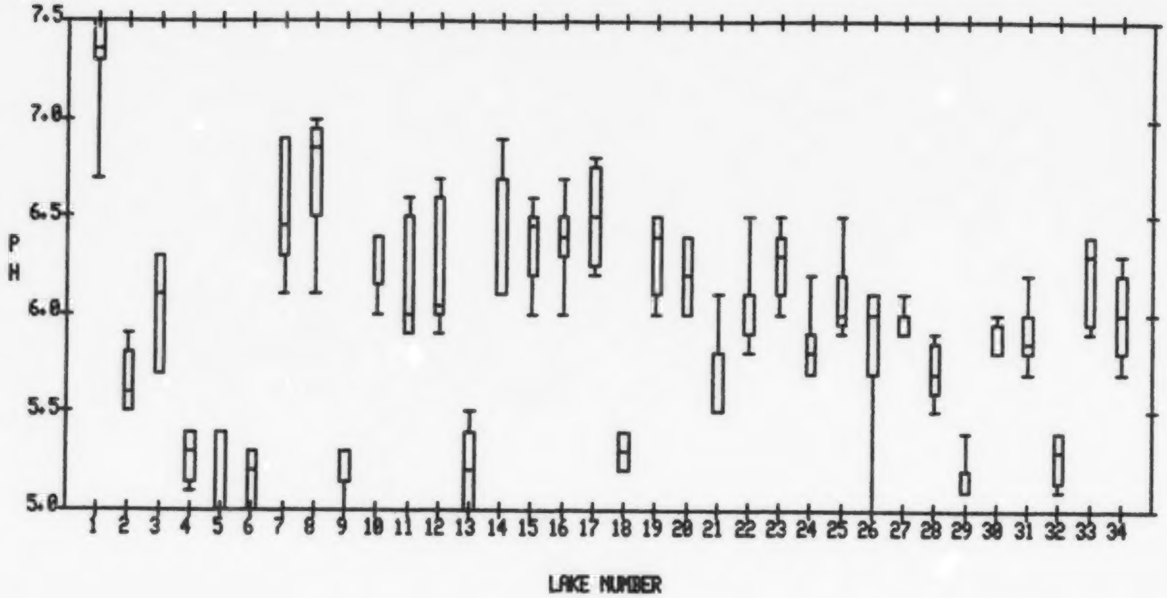


FIGURE 14: BOX AND WHISKER DIAGRAM OF TOTAL ALKALINITY
CONCENTRATION FOR THE NOVA SCOTIA LRTAP LAKES

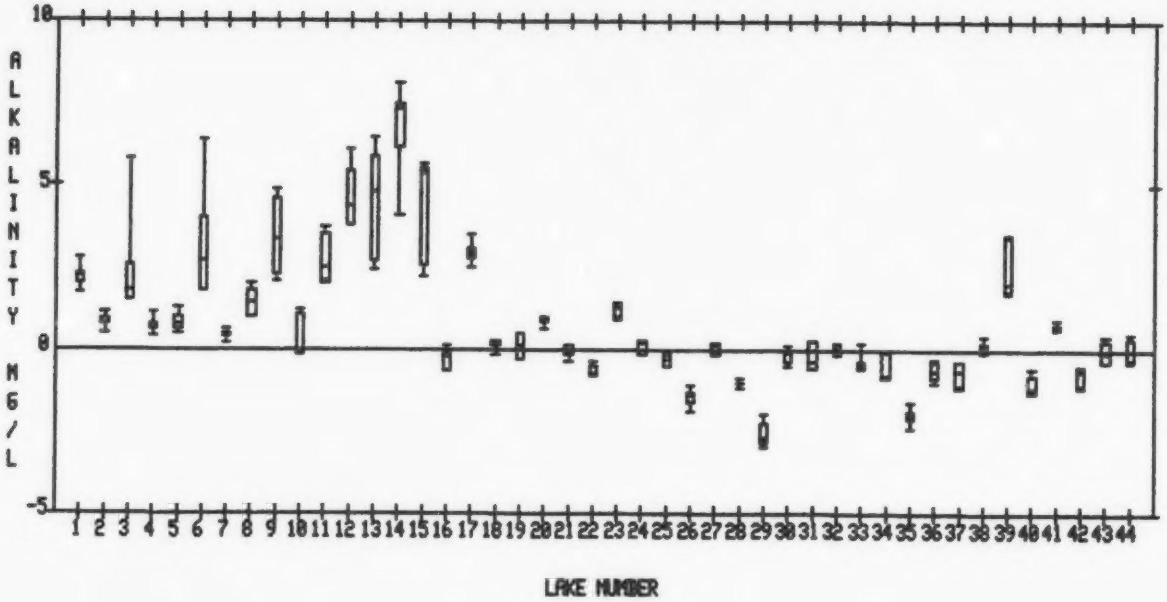


FIGURE 15: BOX AND WHISKER DIAGRAM OF TOTAL ALKALINITY CONCENTRATION FOR THE NEWFOUNDLAND LRTAP LAKES

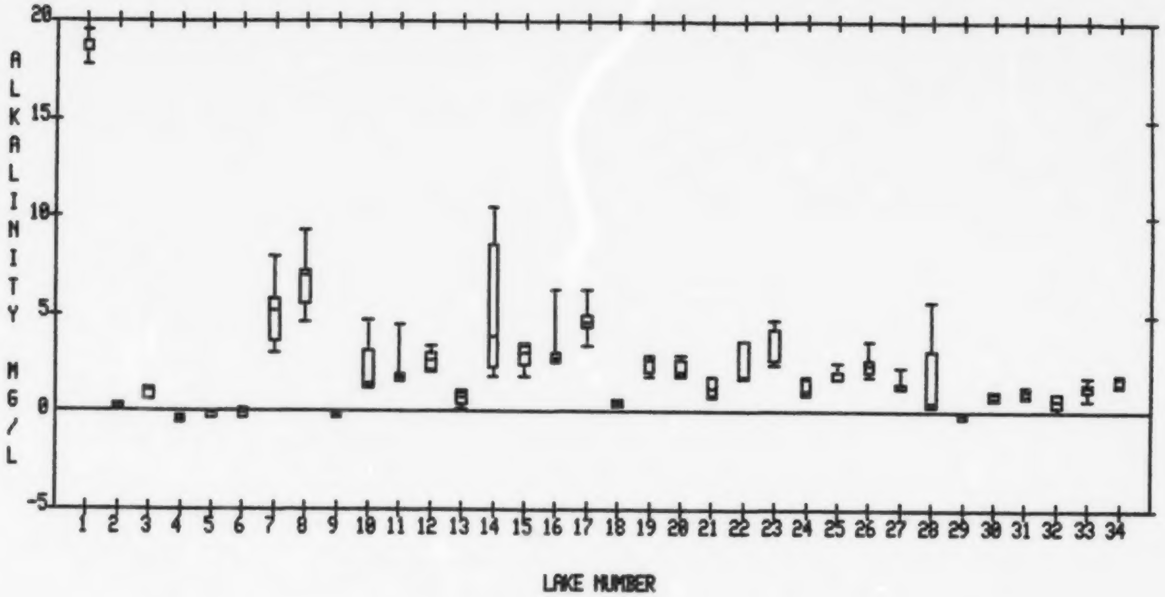


FIGURE 16: BOX AND WHISKER DIAGRAM OF EXCESS CALCIUM AND MAGNESIUM CONCENTRATIONS FOR THE NOVA SCOTIA LRTAP LAKES

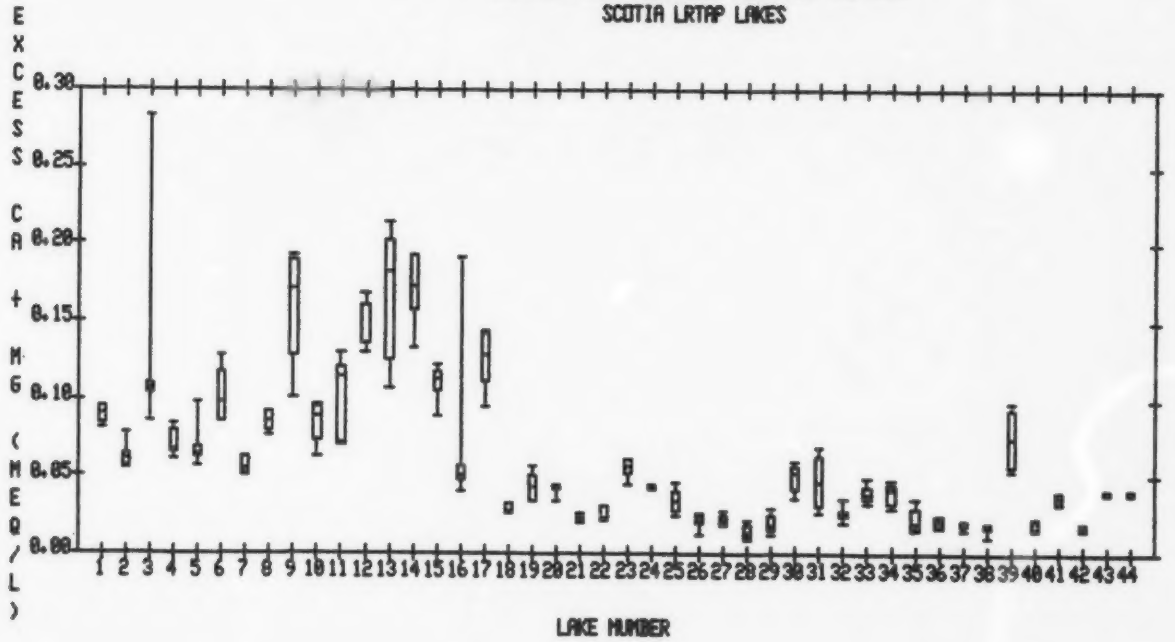


FIGURE 17: BOX AND WHISKER DIAGRAM OF EXCESS CALCIUM AND MAGNESIUM CONCENTRATION FOR THE NEWFOUNDLAND LRTAP LAKES

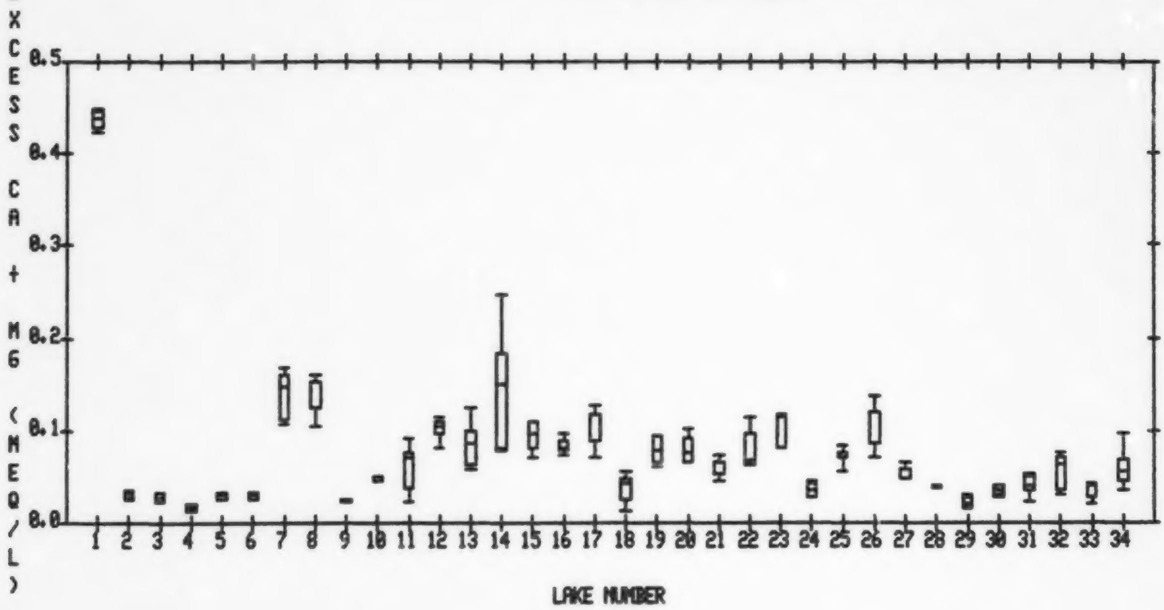


FIGURE 18: BOX AND WHISKER DIAGRAM OF EXCESS MTB SULPHATE CONCENTRATION FOR THE NOVA SCOTIA LRTAP LAKES

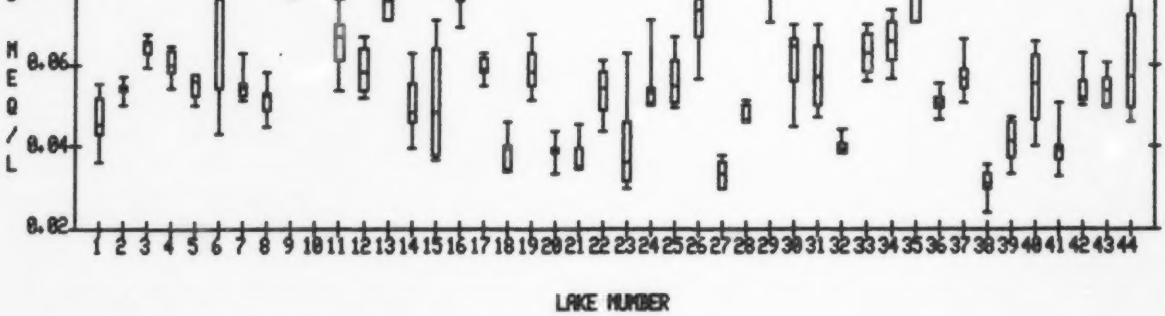


FIGURE 17A: RELATIONSHIP BETWENN ORGANIC ANIONS AND DELTA SULPHATE AND ORGANIC ANIONS MINUS ALUMINIUM AND IRON VERSUS DELTA SULPHATE FOR THE NOVA SCOTIA LRTAP LAKES

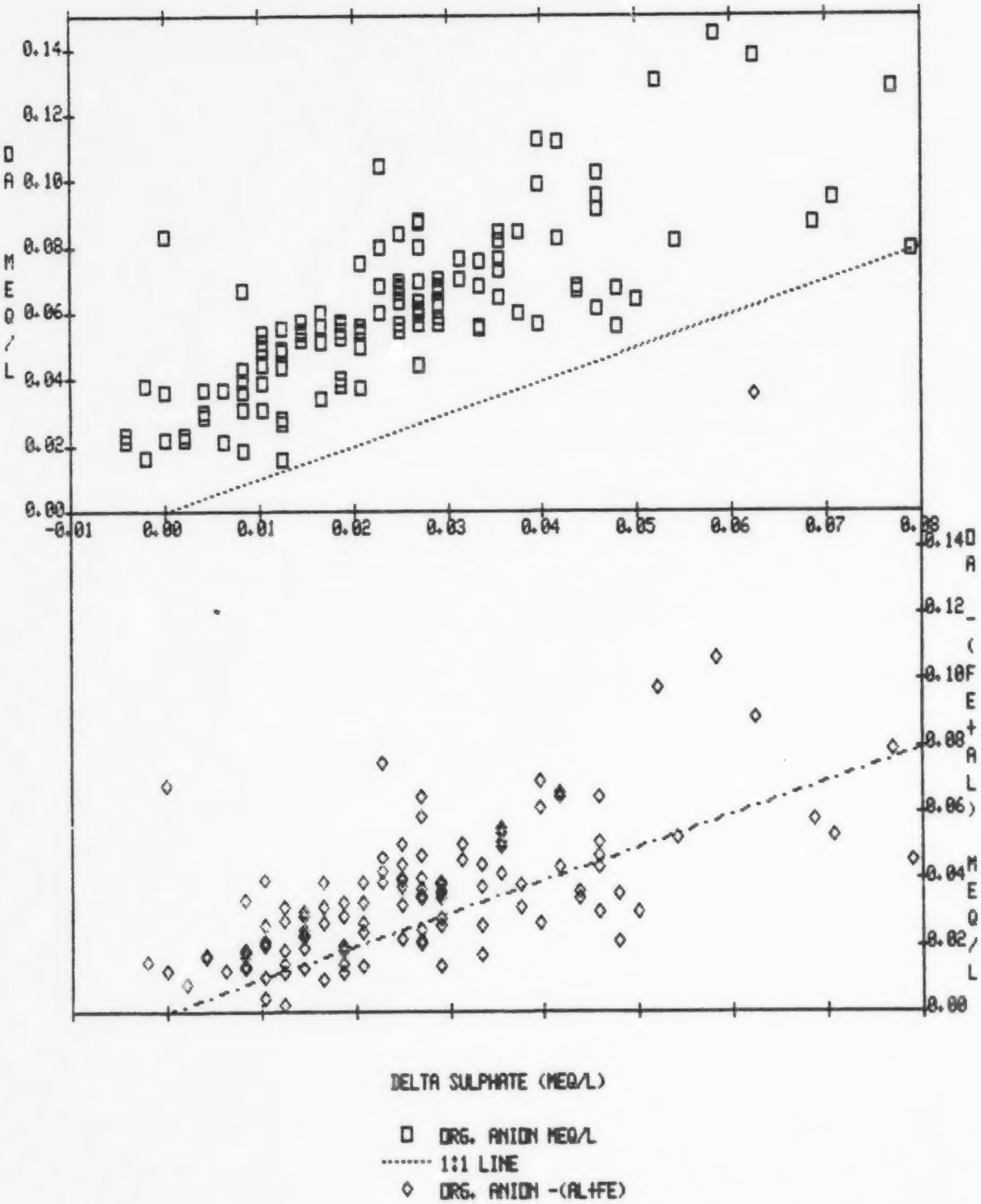


FIGURE 19: BOX AND WHISKER DIAGRAM OF EXCESS IC SULPHATE
CONCENTRATIONS FOR THE NOVA SCOTIA LRTAP LAKES
WITH WATER COLOUR VALUES EXCEEDING 30 HAZEN UNITS

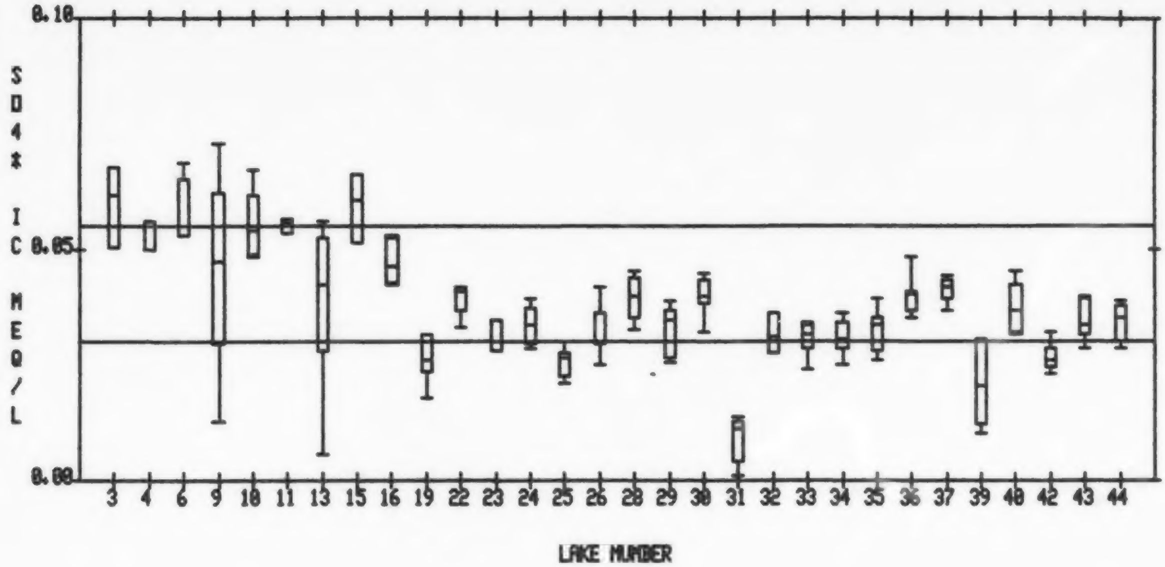


FIGURE 20: BOX AND WHISKER DIAGRAM OF EXCESS MTB SULPHATE
CONCENTRATIONS FOR THE NEWFOUNDLAND LRTAP LAKES

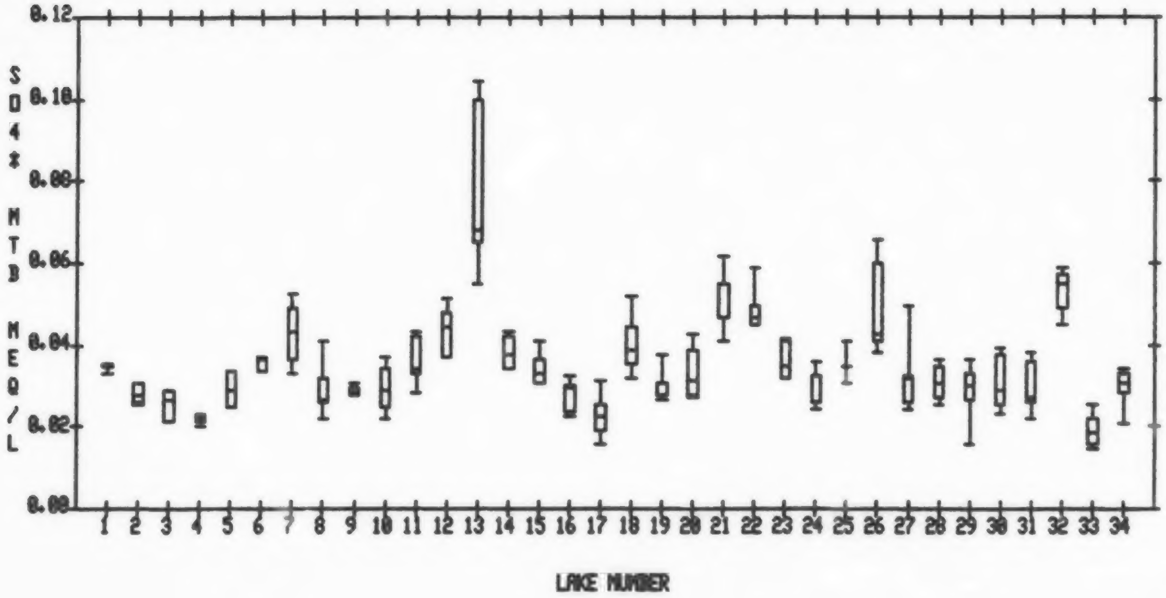


FIGURE 21: BOX AND WHISKER DIAGRAM OF EXCESS IC SULPHATE CONCENTRATION FOR THE NEWFOUNDLAND LRTAP LAKES WITH WATER COLOURS EXCEEDING 30 HAZEN UNITS

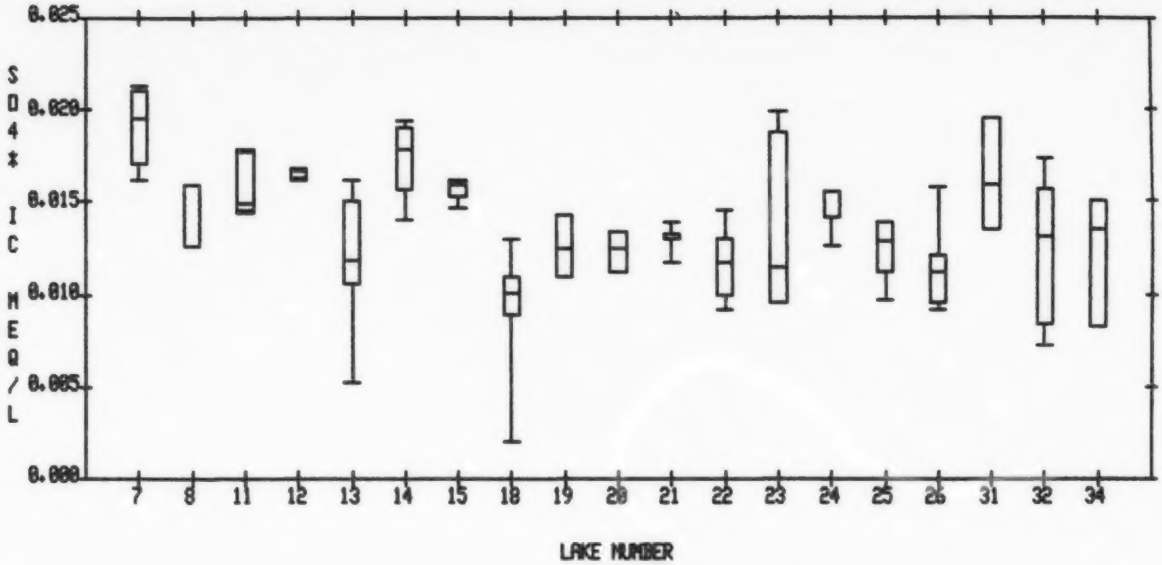


FIGURE 22: BOX AND WHISKER DIAGRAM OF ALKALINITY DEFICIT (CA*+MG*-ALK) FOR THE NOVA SCOTIA LRTAP LAKES

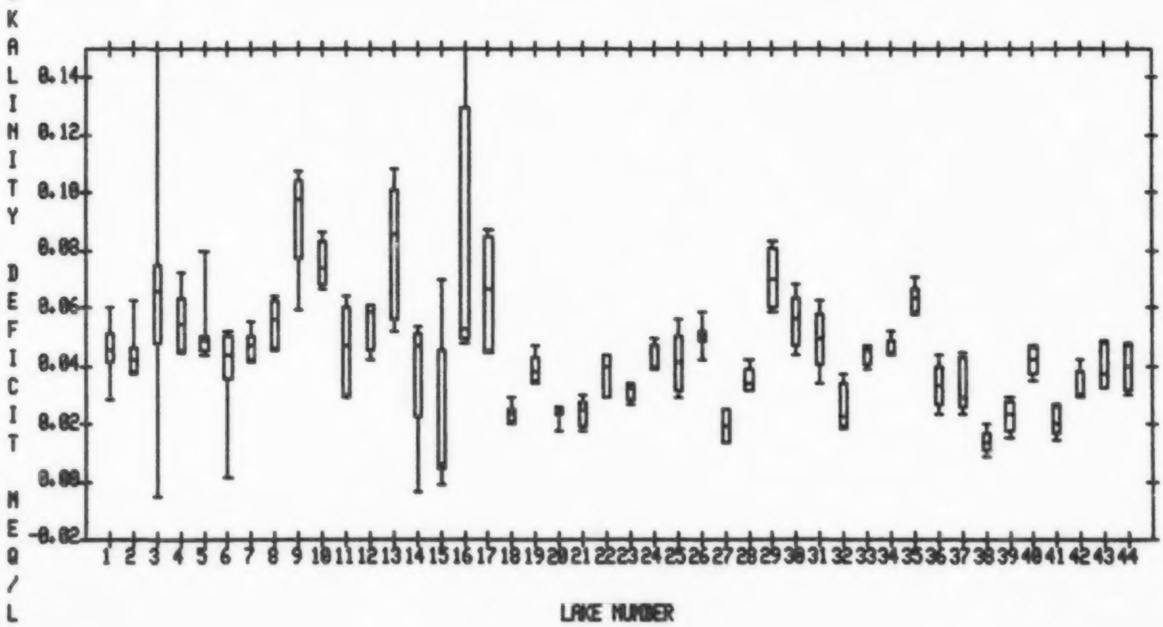


FIGURE 23: RELATIONSHIP BETWEEN MEASURED HYDROGEN ION CONCENTRATION AND THE HYDROGEN ION CONCENTRATION ESTIMATED FROM NEGATIVE GRAN ALKALINITY FOR THE NOVA SCOTIA LRTAP LAKES

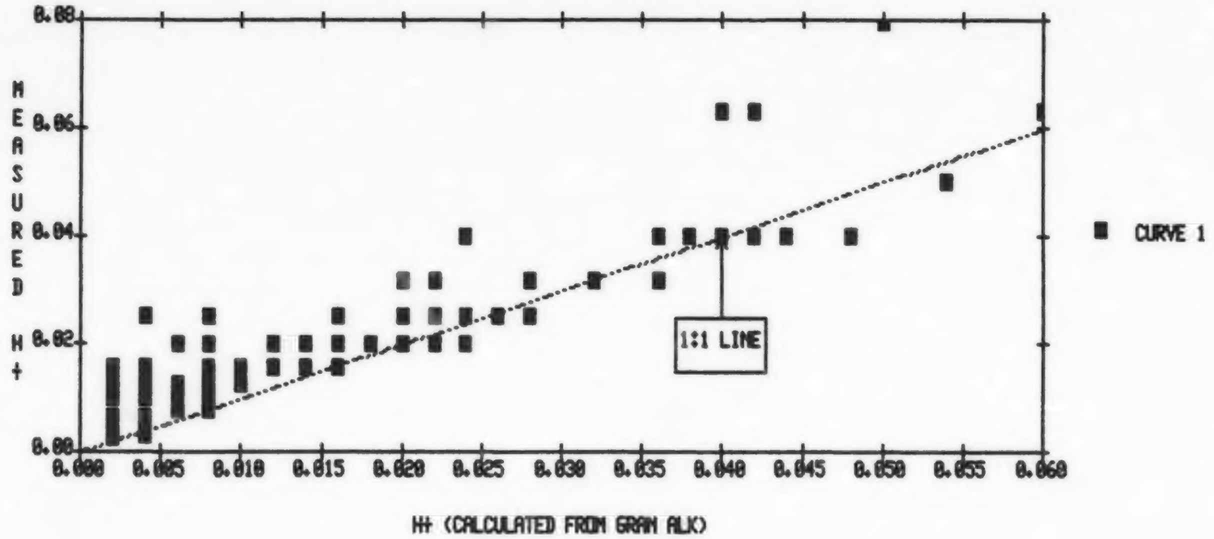


FIGURE 24: BOX AND WHISKER DIAGRAM OF ALKALINITY DEFICIT (CA*+MG*-ALK) FOR THE NEWFOUNDLAND LRTAP LAKES

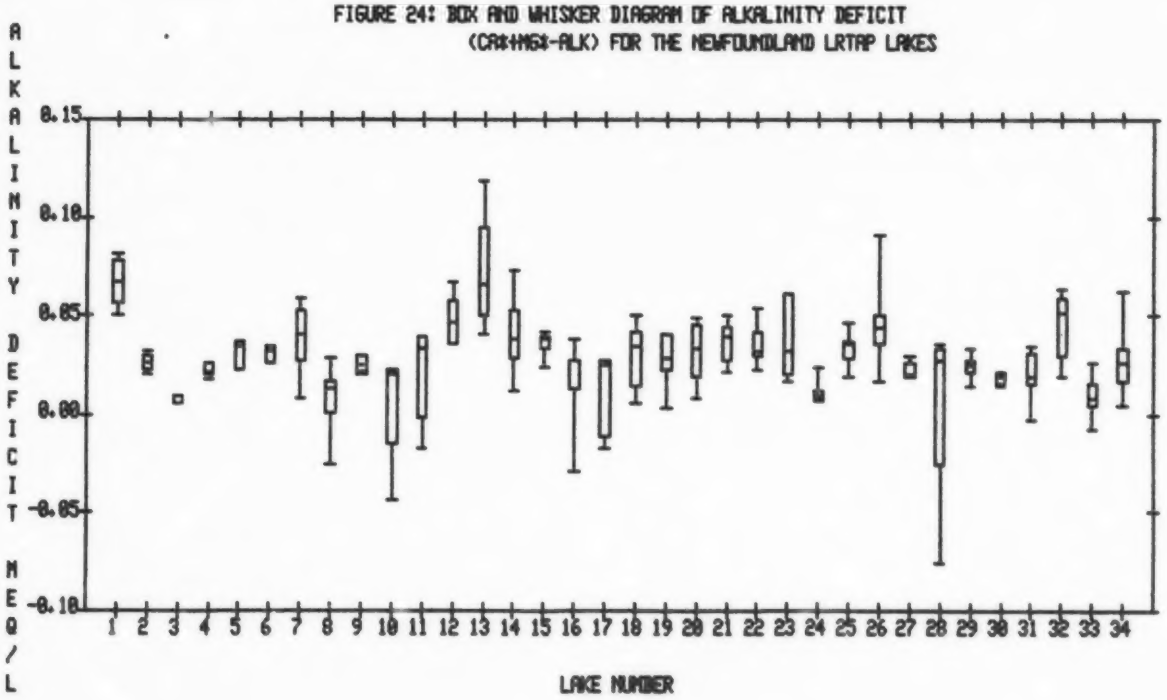


FIGURE 25: BOX AND WHISKER DIAGRAM OF EXTRACTABLE ALUMINIUM CONCENTRATION FOR THE NOVA SCOTIA LRTAP LAKES

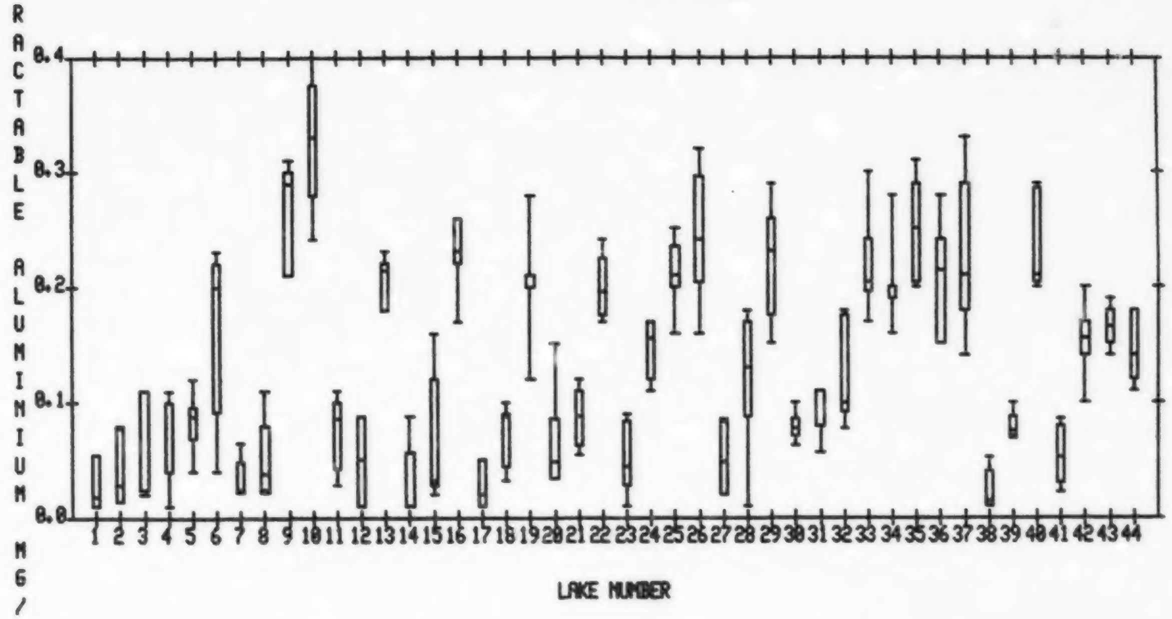


FIGURE 26: RELATIONSHIP BETWEEN EXTRACTABLE ALUMINIUM CONCENTRATION AND WATER COLOUR FOR THE NOVA SCOTIA LRTAP LAKES

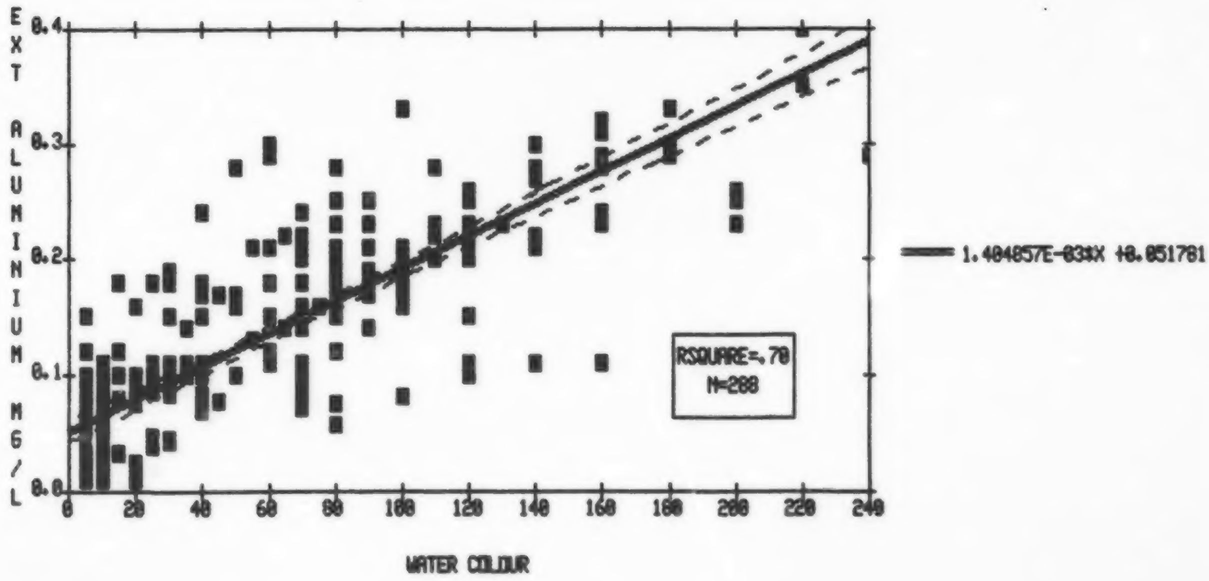


FIGURE 27: BOX AND WHISKER DIAGRAM OF EXTRACTABLE ALUMINIUM CONCENTRATION FOR THE NEWFOUNDLAND LRTAP LAKES

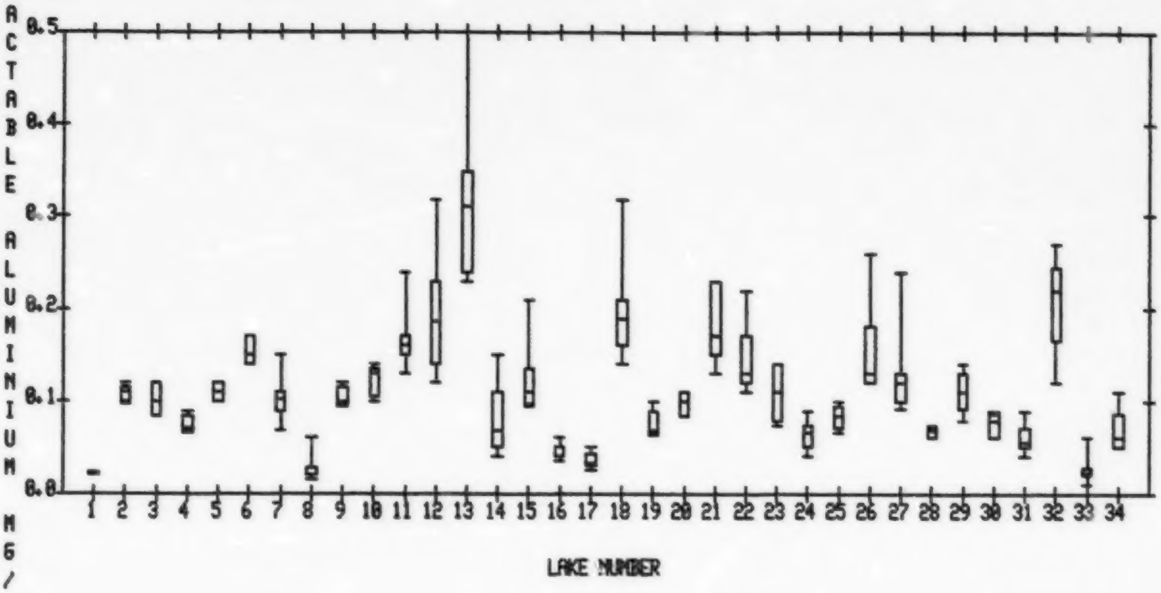


FIGURE 28: RELATIONSHIP BETWEEN EXTRACTABLE ALUMINIUM CONCENTRATION AND WATER COLOUR FOR THE NEWFOUNDLAND LRTAP LAKES

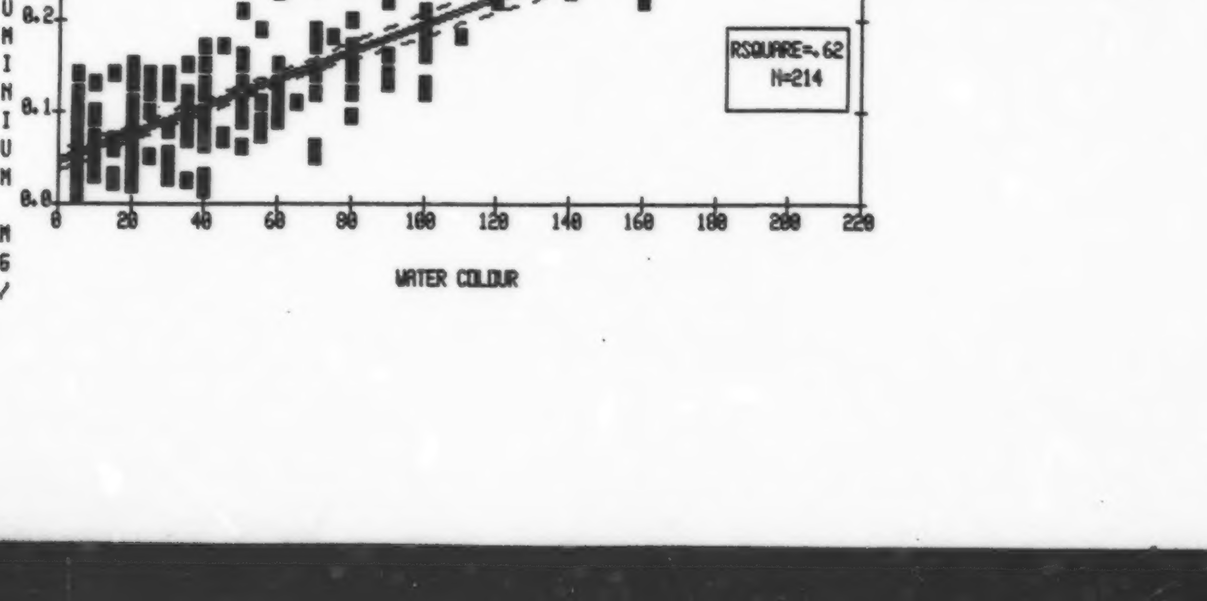


FIGURE 29: BOX AND WHISKER DIAGRAM OF EXTRACTABLE IRON CONCENTRATIONS FOR THE NOVA SCOTIA LRTAP LAKES

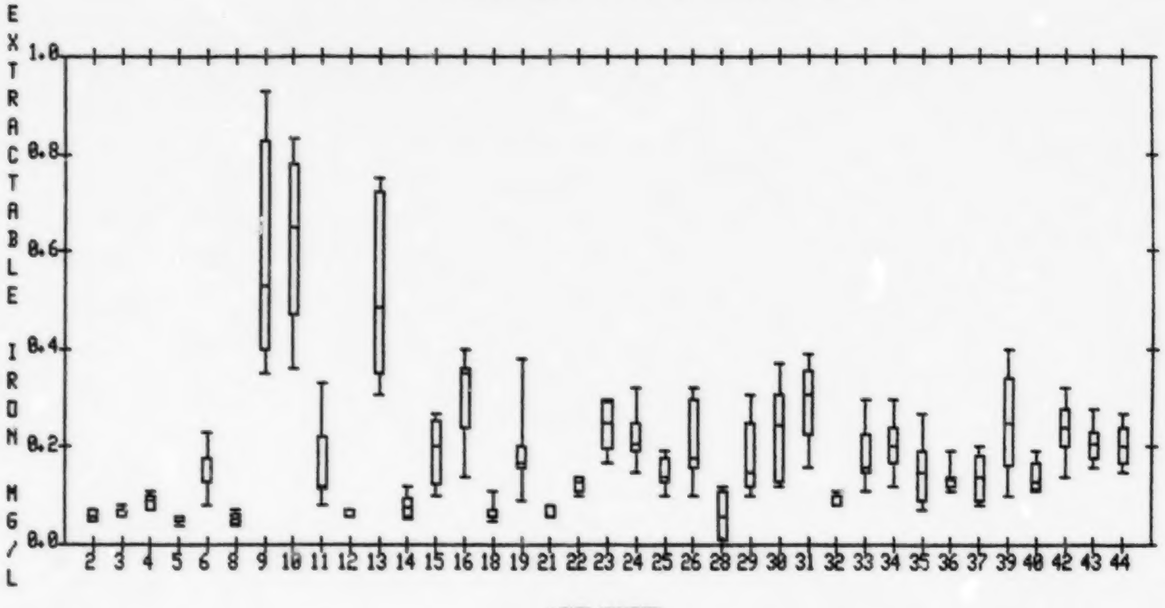


FIGURE 30: BOX AND WHISKER DIAGRAM OF EXTRACTABLE IRON CONCENTRATION FOR THE NEWFOUNDLAND LRTAP LAKES

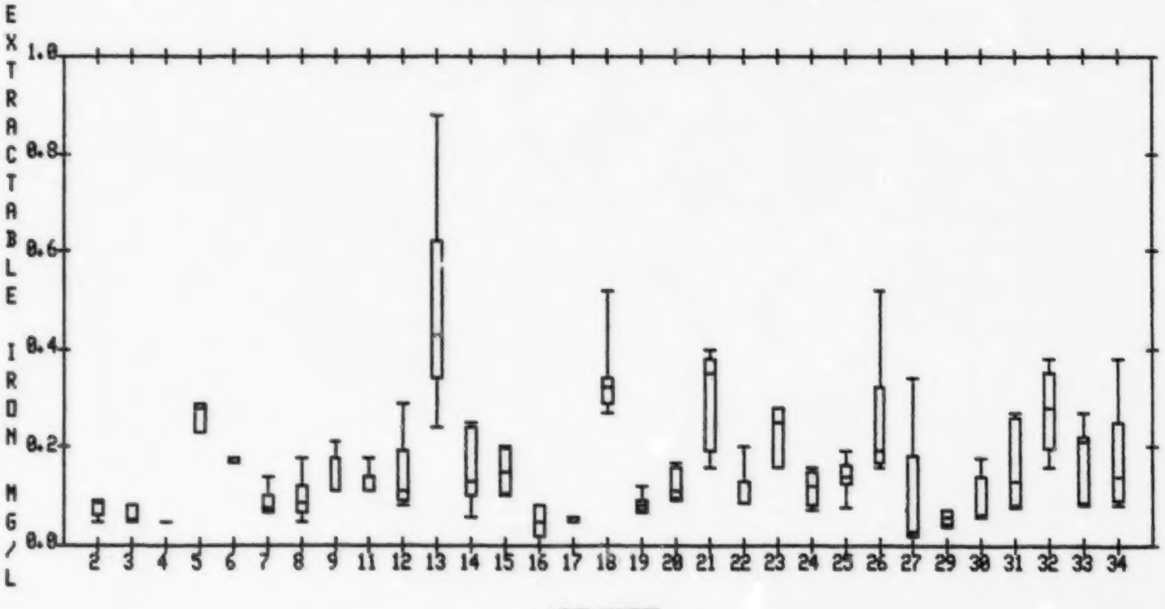


FIGURE 31: HENRIKSEN NOMOGRAPH FOR THE NOVA SCOTIA LRTAP LAKES USING MTB SULPHATE CONCENTRATIONS

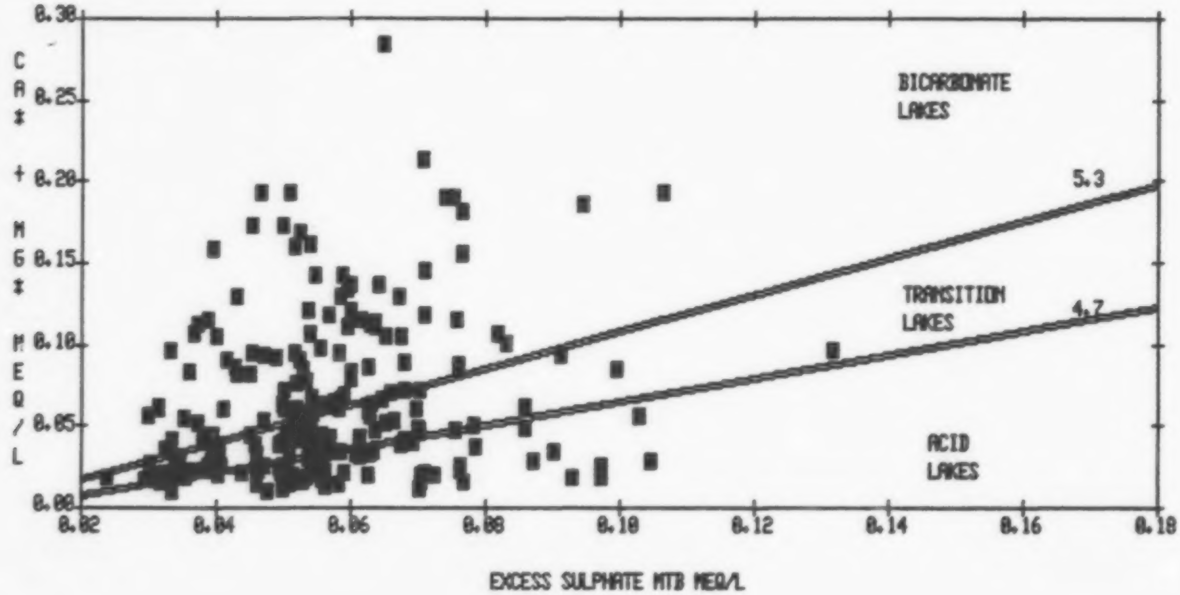


FIGURE 31: HENRIKSEN NOMOGRAPH FOR THE NOVA SCOTIA LRTAP LAKES USING IC SULPHATE CONCENTRATIONS

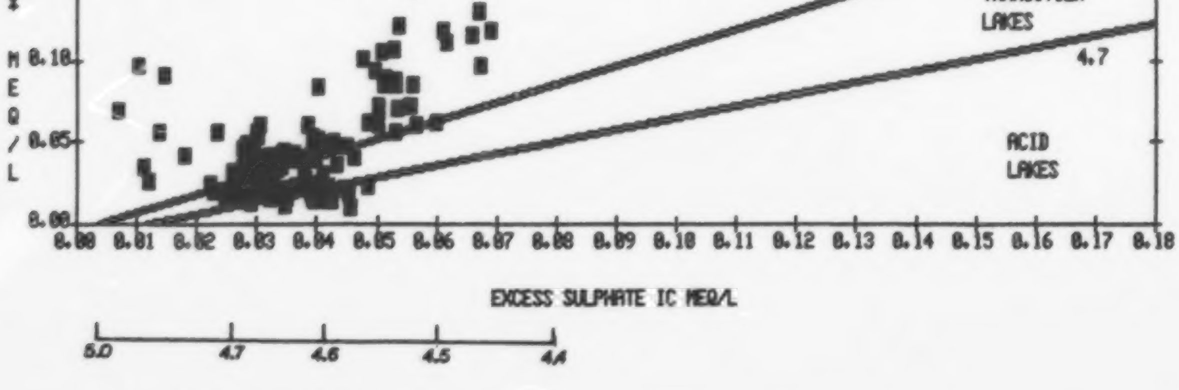


FIGURE 33: HENRIKSEN NOMOGRAPH FOR THE NEWFOUNDLAND LRTAP LAKES USING MTB SULPHATE CONCENTRATIONS

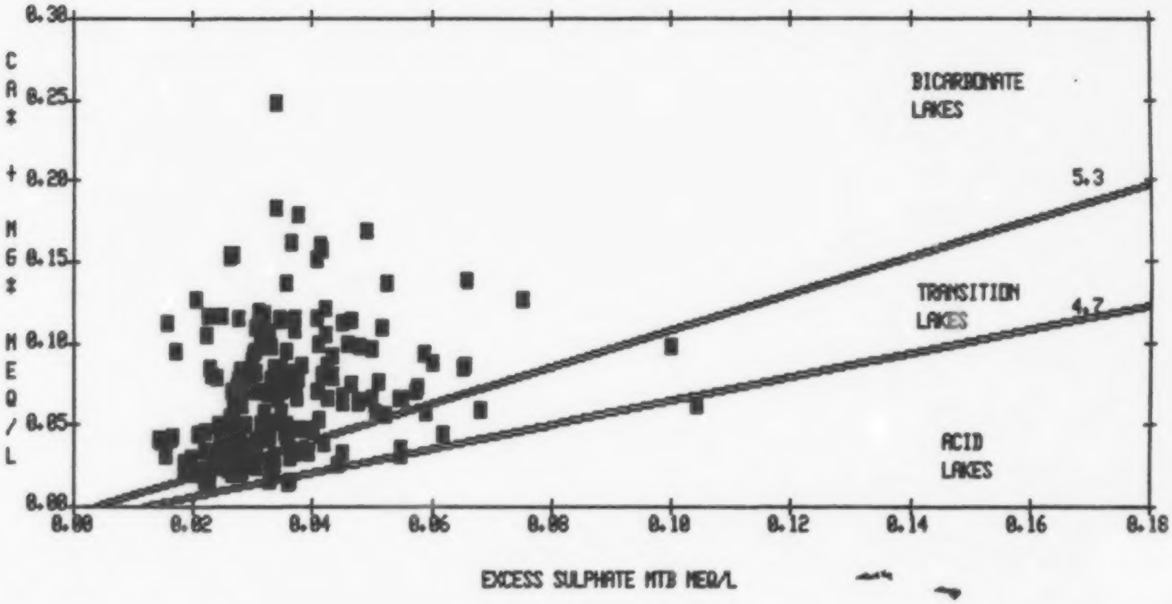
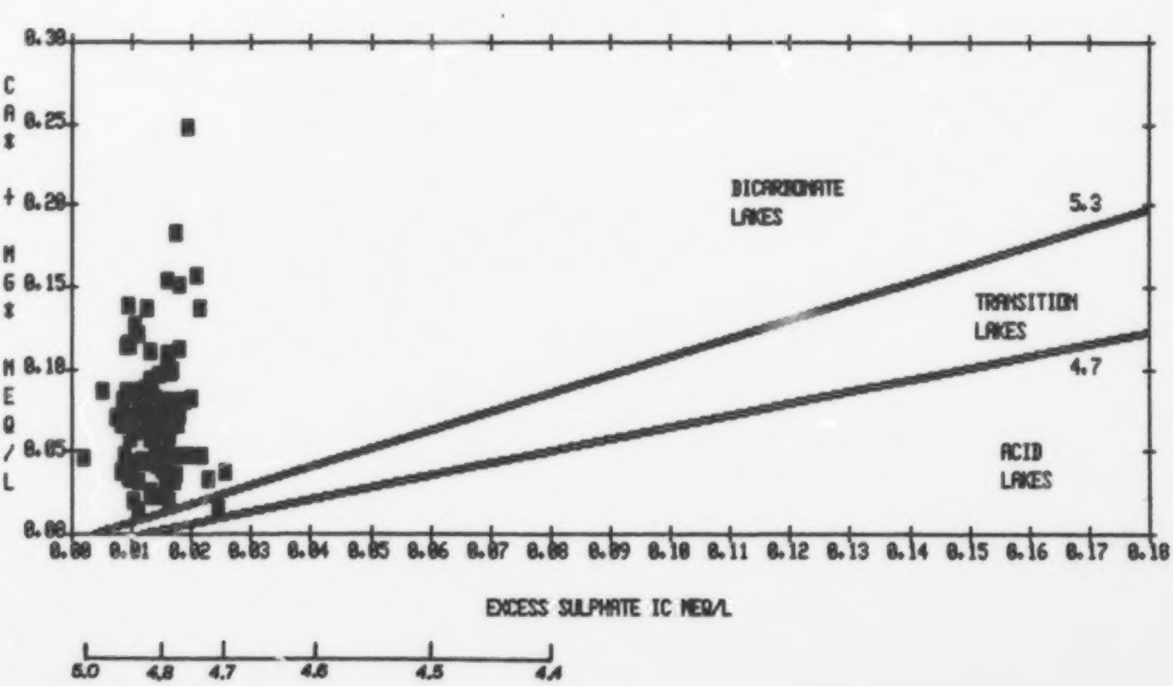


FIGURE 34: HENRIKSEN NOMOGRAPH FOR THE NEWFOUNDLAND LRTAP LAKES USING IC SULPHATE CONCENTRATIONS



# APPENDIX I

# WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

|  | 0 NAQUADAT NUMBER | 1 LAKE # | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 01NS01DA0002 | 1 | 300701 | 26-MAY-83 | 1201 | 244 |  |  | 6.3 |  | 43 |
| 2 | 01NS01DA0002 | 1 | 302309 | 18-OCT-83 | 1535 | 244 | 13.0 |  | 5.9 | 40.0 | 43 |
| 3 | 01NS01DA0002 | 1 | 400358 | 02-MAY-84 | 1035 | 244 |  | 5.4 | 6.0 | 44.0 | 42 |
| 4 | 01NS01DA0002 | 1 | 402754 | 16-OCT-84 | 1135 | 244 | 12.0 | 6.3 | 6.6 | 22.5 | 45 |
| 5 | 01NS01DA0002 | 1 | 500610 | 02-JUN-85 | 1515 | 244 |  | 6.4 | 6.2 | 45.0 | 48 |
| 6 | 01NS01DA0002 | 1 | 501863 | 22-OCT-85 | 945 | T244 |  | 5.7 | 6.5 | 45.0 | 50 |
| 7 | 01NS01DA0002 | 1 | 501864 | 22-OCT-85 | 946 | T244 |  |  | 6.6 |  | 49 |
| 8 | 01NS01DA0003 | 2 | 300702 | 26-MAY-83 | 1201 | 244 |  |  | 5.6 |  | 50 |
| 9 | 01NS01DA0003 | 2 | 302304 | 18-OCT-83 | 1500 | 244 | 14.0 |  | 5.8 | 48.0 | 50 |
| 10 | 01NS01DA0003 | 2 | 400359 | 02-MAY-84 | 1115 | 244 | 11.0 | 4.8 | 5.5 | 52.0 | 48 |
| 11 | 01NS01DA0003 | 2 | 402755 | 16-OCT-84 | 1220 | T244 | 12.0 | 5.8 | 6.2 | 26.0 | 50 |
| 12 | 01NS01DA0003 | 2 | 402756 | 16-OCT-84 | 1222 | T244 | 12.0 | 6.2 | 6.1 | 26.0 | 50 |
| 13 | 01NS01DA0003 | 2 | 402757 | 16-OCT-84 | 1224 | T244 | 12.0 | 6.1 | 6.1 | 26.0 | 50 |
| 14 | 01NS01DA0003 | 2 | 500611 | 02-JUN-85 | 1350 | 244 |  | 5.8 | 5.7 | 52.0 | 55 |
| 15 | 01NS01DA0004 | 3 | 300703 | 26-MAY-83 | 1201 | 244 |  |  | 6.1 |  | 60 |
| 16 | 01NS01DA0004 | 3 | 302305 | 18-OCT-83 | 1510 | 244 | 13.5 |  | 6.0 | 59.0 | 62 |
| 17 | 01NS01DA0004 | 3 | 400360 | 02-MAY-84 | 1105 | 244 | 10.5 | 5.9 | 5.8 | 62.0 | 60 |
| 18 | 01NS01DA0004 | 3 | 400361 | 02-MAY-84 | 1106 | 244 | 10.5 | 5.9 | 5.8 | 62.0 | 60 |
| 19 | 01NS01DA0004 | 3 | 400362 | 02-MAY-84 | 1107 | 244 | 10.5 | 5.9 | 5.8 | 62.0 | 60 |
| 20 | 01NS01DA0004 | 3 | 402758 | 16-OCT-84 | 1210 | 244 | 12.0 | 6.3 | 6.5 | 31.0 | 61 |
| 21 | 01NS01DA0004 | 3 | 500612 | 02-JUN-85 | 1345 | 244 |  | 6.4 | 6.3 | 62.0 | 68 |
| 22 | 01NS01DA0005 | 4 | 300704 | 26-MAY-83 | 1201 | 244 |  |  | 5.7 |  | 48 |
| 23 | 01NS01DA0005 | 4 | 302307 | 18-OCT-83 | 1525 | 244 | 13.0 |  | 5.8 | 48.0 | 47 |
| 24 | 01NS01DA0005 | 4 | 400363 | 02-MAY-84 | 1100 | 244 | 11.5 | 5.3 | 5.3 | 48.0 | 47 |
| 25 | 01NS01DA0005 | 4 | 402759 | 16-OCT-84 | 1201 | 244 | 12.0 | 5.7 | 6.1 | 26.0 | 51 |
| 26 | 01NS01DA0005 | 4 | 500613 | 02-JUN-85 | 1400 | T244 |  | 5.9 | 5.6 | 52.0 | 56 |
| 27 | 01NS01DA0005 | 4 | 500614 | 02-JUN-85 | 1402 | T244 |  |  | 5.6 |  | 56 |
| 28 | 01NS01DA0005 | 4 | 500615 | 02-JUN-85 | 1404 | T244 |  |  | 5.5 |  | 56 |
| 29 | 01NS01DA0006 | 5 | 300705 | 26-MAY-83 | 1201 | 244 |  |  | 5.6 |  | 47 |
| 30 | 01NS01DA0006 | 5 | 302308 | 18-OCT-83 | 1530 | 244 | 13.0 |  | 5.8 | 44.0 | 51 |
| 31 | 01NS01DA0006 | 5 | 400364 | 02-MAY-84 | 1045 | 244 | 11.0 | 5.4 | 5.4 | 46.0 | 45 |
| 32 | 01NS01DA0006 | 5 | 400372 | 02-MAY-84 | 1046 | 244 | 11.0 | 5.4 | 5.6 | 46.0 | 45 |
| 33 | 01NS01DA0006 | 5 | 400373 | 02-MAY-84 | 1047 | 244 | 11.0 | 5.4 | 5.6 | 46.0 | 45 |
| 34 | 01NS01DA0006 | 5 | 402760 | 16-OCT-84 | 1120 | 244 | 12.0 | 6.3 | 6.2 | 12.5 | 48 |
| 35 | 01NS01DA0006 | 5 | 500616 | 02-JUN-85 | 1410 | T244 |  | 6.1 | 5.8 | 48.0 | 50 |
| 36 | 01NS01DA0006 | 5 | 500617 | 02-JUN-85 | 1412 | T244 |  |  | 5.7 |  | 50 |
| 37 | 01NS01DA0006 | 5 | 500618 | 02-JUN-85 | 1414 | T244 |  |  | 5.8 |  | 50 |
| 38 | 01NS01DA0007 | 6 | 300706 | 26-MAY-83 | 1201 | 244 |  |  | 6.1 |  | 54 |
| 39 | 01NS01DA0007 | 6 | 302301 | 18-OCT-83 | 1430 | 244 | 12.0 |  | 6.0 | 60.0 | 62 |
| 40 | 01NS01DA0007 | 6 | 400365 | 02-MAY-84 | 1205 | 244 | 12.0 | 5.7 | 5.7 | 58.0 | 53 |
| 41 | 01NS01DA0007 | 6 | 400366 | 02-MAY-84 | 1206 | 244 | 12.0 | 5.7 | 5.7 | 58.0 | 54 |
| 42 | 01NS01DA0007 | 6 | 400367 | 02-MAY-84 | 1207 | 244 | 12.0 | 5.7 | 5.7 | 58.0 | 54 |
| 43 | 01NS01DA0007 | 6 | 402761 | 16-OCT-84 | 1350 | 244 | 12.0 | 6.0 | 6.6 | 16.0 | 60 |
| 44 | 01NS01DA0007 | 6 | 500619 | 02-JUN-85 | 1335 | 244 |  | 6.7 | 6.7 | 120.0 | 126 |
| 45 | 01NS01EA0002 | 7 | 300697 | 26-MAY-83 | 1201 | 244 |  |  | 5.6 |  | 49 |
| 46 | 01NS01EA0002 | 7 | 302303 | 18-OCT-83 | 1450 | 244 | 13.0 |  | 5.7 | 66.0 | 49 |
| 47 | 01NS01EA0002 | 7 | 400354 | 02-MAY-84 | 1145 | 244 | 9.0 | 5.5 | 5.5 | 52.0 | 48 |
| 48 | 01NS01EA0002 | 7 | 402748 | 16-OCT-84 | 1230 | T244 | 13.0 | 5.6 | 5.8 | 25.0 | 49 |
| 49 | 01NS01EA0002 | 7 | 402749 | 16-OCT-84 | 1232 | T244 | 13.0 | 5.6 | 5.8 | 25.0 | 49 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 1 01NS01DA0002 | | 5 | | | 1.50 | | 0.40 | 4.4 | 7.6 |
| 2 01NS01DA0002 | 0.4 | 5 | | 2.8 | 1.30 | 0.85 | 0.50 | 4.7 | 7.7 |
| 3 01NS01DA0002 | 0.4 | 5 | | 2.0 | 1.40 | 0.79 | 0.40 | 4.5 | 8.1 |
| 4 01NS01DA0002 | 0.4 | 5 | 2.2 | | 1.40 | 0.85 | 0.45 | 4.7 | 8.2 |
| 5 01NS01DA0002 | 0.4 | 5 | 1.7 | | 1.50 | 1.00 | 0.44 | 4.9 | 9.6 |
| 6 01NS01DA0002 | 0.3 | 5 | 2.2 | | 1.50 | 1.00 | 0.51 | 5.2 | 9.5 |
| 7 01NS01DA0002 | 0.3 | 5 | 2.3 | | 1.50 | 1.00 | 0.51 | 5.2 | 9.5 |
| 8 01NS01DA0003 | | 10 | | 0.5 | 1.25 | | 0.40 | 5.8 | 9.8 |
| 9 01NS01DA0003 | 0.4 | 5 | | 1.1 | 1.00 | 0.92 | 0.50 | 6.0 | 10.0 |
| 10 01NS01DA0003 | 0.6 | 20 | | 0.8 | 1.10 | 0.88 | 0.40 | 5.8 | 9.9 |
| 11 01NS01DA0003 | 0.3 | 5 | 0.9 | | 1.10 | 0.89 | 0.40 | 5.9 | 9.8 |
| 12 01NS01DA0003 | 0.4 | 5 | 0.9 | | 1.00 | 0.87 | 0.40 | 6.0 | 10.1 |
| 13 01NS01DA0003 | 0.4 | 5 | 0.9 | | 1.00 | 0.91 | 0.40 | 5.9 | 10.3 |
| 14 01NS01DA0003 | 0.5 | 5 | | 0.8 | 1.30 | 1.10 | 0.41 | 6.2 | 11.7 |
| 15 01NS01DA0004 | | 30 | | | 1.75 | | 0.40 | 6.9 | 11.1 |
| 16 01NS01DA0004 | 0.3 | 5 | 5.8 | 2.9 | 1.70 | 1.20 | 0.60 | 7.4 | 11.1 |
| 17 01NS01DA0004 | 0.5 | 30 | | 1.5 | 1.70 | 1.20 | 0.40 | 7.0 | 12.0 |
| 18 01NS01DA0004 | 0.4 | 30 | | 1.5 | 5.30 | 1.20 | 0.40 | 6.9 | 12.1 |
| 19 01NS01DA0004 | 0.5 | 35 | | 1.6 | 1.70 | 1.20 | 0.40 | 7.0 | 12.0 |
| 20 01NS01DA0004 | 0.4 | 10 | 2.6 | | 1.70 | 1.20 | 0.45 | 6.9 | 11.1 |
| 21 01NS01DA0004 | 0.4 | 10 | 1.9 | | 1.30 | 1.40 | 0.56 | 7.4 | 14.3 |
| 22 01NS01DA0005 | | 40 | | 0.4 | 1.25 | | 0.30 | 5.6 | 9.0 |
| 23 01NS01DA0005 | 0.6 | 5 | | 0.8 | 0.95 | 0.85 | 0.70 | 5.6 | 8.6 |
| 24 01NS01DA0005 | 0.6 | 35 | | 0.6 | 1.10 | 0.88 | 0.30 | 5.4 | 9.3 |
| 25 01NS01DA0005 | 0.4 | 10 | 1.1 | | 1.10 | 0.95 | 0.40 | 6.0 | 10.0 |
| 26 01NS01DA0005 | 0.5 | 20 | | 0.8 | 1.30 | 1.10 | 0.41 | 6.2 | 11.6 |
| 27 01NS01DA0005 | 0.5 | 20 | | 0.6 | 1.40 | 1.10 | 0.40 | 6.2 | 11.6 |
| 28 01NS01DA0005 | 0.5 | 20 | | 0.6 | 1.20 | 1.00 | 0.40 | 5.5 | 11.5 |
| 29 01NS01DA0006 | | 15 | | 0.5 | 1.10 | | 0.30 | 5.6 | 9.1 |
| 30 01NS01DA0006 | 0.5 | 5 | | 1.3 | 1.20 | 0.95 | 0.50 | 6.2 | 10.0 |
| 31 01NS01DA0006 | 0.5 | 25 | | 0.7 | 1.00 | 0.88 | 0.30 | 5.4 | 8.9 |
| 32 01NS01DA0006 | 0.4 | 25 | | 0.6 | 1.00 | 0.82 | 0.30 | 5.3 | 9.2 |
| 33 01NS01DA0006 | 0.4 | 25 | | 0.6 | 1.00 | 0.88 | 0.30 | 5.2 | 9.2 |
| 34 01NS01DA0006 | 0.6 | 5 | 1.0 | | 1.00 | 0.92 | 0.40 | 5.7 | 9.4 |
| 35 01NS01DA0006 | 0.6 | 5 | | 0.8 | 1.00 | 1.00 | 0.40 | 5.5 | 10.3 |
| 36 01NS01DA0006 | 0.5 | 5 | | 0.8 | 1.00 | 1.00 | 0.40 | 5.5 | 10.3 |
| 37 01NS01DA0006 | 0.6 | 5 | | 0.9 | 1.00 | 1.40 | 0.40 | 5.5 | 10.3 |
| 38 01NS01DA0007 | | 80 | | | 1.60 | | 0.50 | 6.6 | 9.4 |
| 39 01NS01DA0007 | 0.6 | 20 | | 4.0 | 1.70 | 1.20 | 0.70 | 7.8 | 10.0 |
| 40 01NS01DA0007 | 0.6 | 80 | | 1.8 | 1.50 | 0.90 | 0.60 | 6.3 | 9.7 |
| 41 01NS01DA0007 | 0.6 | 70 | | 1.8 | 1.50 | 0.91 | 0.60 | 6.5 | 9.7 |
| 42 01NS01DA0007 | 0.7 | 70 | | 1.8 | 1.50 | 0.93 | 0.60 | 6.5 | 9.7 |
| 43 01NS01DA0007 | 0.6 | 30 | 3.6 | | 1.50 | 1.20 | 0.45 | 7.3 | 10.1 |
| 44 01NS01DA0007 | 0.6 | 5 | 6.4 | | 3.20 | 1.90 | 1.15 | 14.6 | 29.0 |
| 45 01NS01EA0002 | | 5 | | 0.2 | 1.10 | | 0.30 | 5.7 | 9.9 |
| 46 01NS01EA0002 | 0.3 | 5 | | 0.6 | 1.00 | 0.91 | 0.50 | 6.0 | 9.5 |
| 47 01NS01EA0002 | 0.4 | 10 | | 0.5 | 1.00 | 0.93 | 0.30 | 5.5 | 10.1 |
| 48 01NS01EA0002 | 0.5 | 5 | | 0.4 | 1.00 | 0.85 | 0.40 | 5.7 | 10.1 |
| 49 01NS01EA0002 | 0.5 | 5 | | 0.4 | 1.00 | 0.86 | 0.35 | 5.6 | 10.7 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P06107L | 23 P07110L | 24 P07601L | 25 P14102L | 26 P29305P | 27 P30304P | 28 P48302P |
|---|---|---|---|---|---|---|---|---|---|
| 1 01NS01DA0002 | 3.7 | 3.4 | 2.5 | 0.01 | 0.10 | | | 0.01 | 0.001 |
| 2 01NS01DA0002 | 2.8 | 3.0 | 2.8 | 0.02 | 0.08 | 4.0 | 0.002 | 0.01 | 0.001 |
| 3 01NS01DA0002 | 3.2 | | 3.1 | 0.01 | 0.06 | 1.6 | 0.002 | 0.01 | 0.001 |
| 4 01NS01DA0002 | 3.2 | | 2.4 | 0.01 | 0.13 | 0.8 | 0.002 | 0.01 | 0.001 |
| 5 01NS01DA0002 | 3.6 | | 3.4 | 0.01 | 0.11 | 0.5 | 0.002 | 0.01 | 0.001 |
| 6 01NS01DA0002 | 3.5 | | 3.0 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 7 01NS01DA0002 | 3.8 | | 3.2 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 8 01NS01DA0003 | 4.1 | 4.3 | 3.7 | 0.01 | 0.10 | | | 0.01 | 0.001 |
| 9 01NS01DA0003 | 3.8 | 3.8 | 3.2 | 0.01 | 0.10 | 1.4 | 0.003 | 0.01 | 0.001 |
| 10 01NS01DA0003 | 4.0 | | 4.3 | 0.01 | 0.18 | 0.3 | 0.002 | 0.01 | 0.001 |
| 11 01NS01DA0003 | 4.0 | | 2.5 | 0.01 | 0.11 | 0.6 | 0.002 | 0.01 | 0.001 |
| 12 01NS01DA0003 | 4.0 | | 2.6 | 0.01 | 0.16 | 0.6 | 0.002 | 0.01 | 0.001 |
| 13 01NS01DA0003 | 4.0 | | 2.6 | 0.01 | 0.11 | 0.7 | 0.002 | 0.01 | 0.001 |
| 14 01NS01DA0003 | 4.2 | | 4.0 | 0.01 | 0.11 | 0.3 | 0.002 | 0.01 | 0.001 |
| 15 01NS01DA0004 | 4.7 | 4.8 | 6.7 | 0.01 | 0.12 | | | 0.01 | 0.001 |
| 16 01NS01DA0004 | 4.6 | 4.5 | 5.6 | 0.01 | 0.13 | 1.5 | 0.002 | 0.01 | 0.001 |
| 17 01NS01DA0004 | 4.8 | | 5.9 | 0.01 | 0.07 | 1.9 | 0.002 | 0.01 | 0.001 |
| 18 01NS01DA0004 | 4.8 | | 6.6 | 0.01 | 0.07 | 1.9 | 0.002 | 0.01 | 0.001 |
| 19 01NS01DA0004 | 4.9 | 4.1 | 6.9 | 0.01 | 0.06 | 1.9 | 0.002 | 0.01 | 0.001 |
| 20 01NS01DA0004 | 4.4 | | 5.0 | 0.01 | 0.12 | 1.1 | 0.002 | 0.01 | 0.001 |
| 21 01NS01DA0004 | 5.0 | | 6.1 | 0.03 | 0.14 | 0.8 | 0.002 | 0.01 | 0.001 |
| 22 01NS01DA0005 | 4.3 | 3.9 | 5.3 | 0.01 | 0.09 | | | 0.01 | 0.001 |
| 23 01NS01DA0005 | 4.0 | 3.9 | 5.2 | 0.01 | 0.08 | 1.8 | 0.003 | 0.02 | 0.001 |
| 24 01NS01DA0005 | 4.1 | 3.7 | 5.3 | 0.01 | 0.06 | 0.3 | 0.002 | 0.01 | 0.001 |
| 25 01NS01DA0005 | 4.0 | | 4.3 | 0.01 | 0.14 | 0.5 | 0.002 | 0.01 | 0.001 |
| 26 01NS01DA0005 | 4.5 | | 6.3 | 0.01 | 0.11 | 0.3 | 0.002 | 0.01 | 0.001 |
| 27 01NS01DA0005 | 4.5 | | 6.3 | 0.01 | 0.11 | 0.3 | 0.002 | 0.01 | 0.001 |
| 28 01NS01DA0005 | 4.7 | | 6.2 | 0.01 | 0.11 | 0.3 | 0.002 | 0.01 | 0.001 |
| 29 01NS01DA0006 | 4.0 | 4.1 | 4.8 | 0.01 | 0.09 | | | 0.01 | 0.001 |
| 30 01NS01DA0006 | 3.8 | 3.8 | 4.7 | 0.02 | 0.11 | 1.3 | 0.002 | 0.02 | 0.001 |
| 31 01NS01DA0006 | 3.9 | | 4.7 | 0.01 | 0.05 | 1.9 | 0.002 | 0.01 | 0.001 |
| 32 01NS01DA0006 | 3.9 | | 4.2 | 0.01 | 0.05 | 1.9 | 0.002 | 0.01 | 0.001 |
| 33 01NS01DA0006 | 4.0 | | 4.4 | 0.01 | 0.05 | 2.0 | 0.002 | 0.01 | 0.001 |
| 34 01NS01DA0006 | 3.7 | | 3.6 | 0.01 | 0.12 | 2.0 | 0.002 | 0.01 | 0.001 |
| 35 01NS01DA0006 | 4.2 | | 4.9 | 0.01 | 0.11 | 1.4 | 0.002 | 0.01 | 0.001 |
| 36 01NS01DA0006 | 4.2 | | 5.1 | 0.01 | 0.10 | 1.4 | 0.002 | 0.01 | 0.001 |
| 37 01NS01DA0006 | 4.1 | | 4.9 | 0.01 | 0.10 | 1.4 | 0.002 | 0.01 | 0.001 |
| 38 01NS01DA0007 | 5.2 | 4.3 | 9.9 | 0.01 | 0.12 | | | 0.01 | 0.001 |
| 39 01NS01DA0007 | 4.8 | 4.7 | 8.6 | 0.01 | 0.16 | 1.4 | 0.002 | 0.01 | 0.001 |
| 40 01NS01DA0007 | 5.0 | 3.9 | 11.0 | 0.01 | 0.09 | 0.4 | 0.002 | 0.01 | 0.001 |
| 41 01NS01DA0007 | 5.0 | 3.9 | 9.5 | 0.01 | 0.09 | 0.4 | 0.002 | 0.01 | 0.001 |
| 42 01NS01DA0007 | 5.0 | 3.9 | 9.8 | 0.01 | 0.09 | 0.4 | 0.002 | 0.01 | 0.001 |
| 43 01NS01DA0007 | 4.0 | | 8.4 | 0.01 | 0.17 | 1.8 | 0.002 | 0.01 | 0.001 |
| 44 01NS01DA0007 | 6.1 | | 5.8 | 0.01 | 0.14 | 0.2 | 0.002 | 0.01 | 0.001 |
| 45 01NS01EA0002 | 4.0 | 4.2 | 3.7 | 0.01 | 0.10 | | | 0.01 | 0.001 |
| 46 01NS01EA0002 | 4.0 | 4.2 | 2.8 | 0.01 | 0.07 | 0.2 | 0.003 | 0.02 | 0.001 |
| 47 01NS01EA0002 | 3.9 | | 3.1 | 0.03 | 0.09 | 0.8 | 0.002 | 0.01 | 0.001 |
| 48 01NS01EA0002 | 4.0 | | 2.6 | 0.01 | 0.11 | 0.2 | 0.002 | 0.01 | 0.001 |
| 49 01NS01EA0002 | 4.0 | | 2.7 | 0.01 | 0.10 | 0.2 | 0.002 | 0.01 | 0.001 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | | 29 PB2302P | 30 P13305P | 31 P26304P | 32 P25304P | 33 ORGANIC ANION MEQ/L |
|---|---|---|---|---|---|---|
| 1 | 01NS01DA0002 | 0.002 | 0.055 | | 0.010 | 0.023579 |
| 2 | 01NS01DA0002 | 0.002 | 0.018 | | 0.020 | 0.025399 |
| 3 | 01NS01DA0002 | 0.002 | 0.055 | 0.030 | 0.010 | 0.028442 |
| 4 | 01NS01DA0002 | 0.002 | 0.011 | | 0.010 | 0.023033 |
| 5 | 01NS01DA0002 | 0.002 | 0.020 | | 0.010 | 0.031805 |
| 6 | 01NS01DA0002 | 0.002 | 0.010 | | 0.014 | 0.028688 |
| 7 | 01NS01DA0002 | 0.002 | 0.011 | | 0.013 | 0.030777 |
| 8 | 01NS01DA0003 | 0.002 | 0.078 | 0.070 | 0.020 | 0.032185 |
| 9 | 01NS01DA0003 | 0.002 | 0.028 | 0.070 | 0.010 | 0.028663 |
| 10 | 01NS01DA0003 | 0.002 | 0.080 | 0.060 | 0.020 | 0.036779 |
| 11 | 01NS01DA0003 | 0.002 | 0.014 | | 0.010 | 0.023386 |
| 12 | 01NS01DA0003 | 0.002 | 0.014 | 0.050 | 0.010 | 0.024100 |
| 13 | 01NS01DA0003 | 0.002 | 0.018 | 0.050 | 0.010 | 0.024100 |
| 14 | 01NS01DA0003 | 0.002 | 0.060 | 0.060 | 0.010 | 0.035333 |
| 15 | 01NS01DA0004 | 0.002 | 0.110 | 0.080 | 0.020 | 0.062103 |
| 16 | 01NS01DA0004 | 0.002 | 0.025 | | 0.020 | 0.051379 |
| 17 | 01NS01DA0004 | 0.002 | 0.110 | 0.060 | 0.020 | 0.052847 |
| 18 | 01NS01DA0004 | 0.002 | 0.110 | 0.060 | 0.020 | 0.059117 |
| 19 | 01NS01DA0004 | 0.002 | 0.110 | 0.060 | 0.020 | 0.061805 |
| 20 | 01NS01DA0004 | 0.002 | 0.020 | | 0.030 | 0.047813 |
| 21 | 01NS01DA0004 | 0.002 | 0.080 | | 0.030 | 0.057533 |
| 22 | 01NS01DA0005 | 0.002 | 0.110 | 0.110 | 0.020 | 0.046816 |
| 23 | 01NS01DA0005 | 0.002 | 0.050 | 0.080 | 0.010 | 0.046577 |
| 24 | 01NS01DA0005 | 0.002 | 0.100 | 0.070 | 0.020 | 0.043620 |
| 25 | 01NS01DA0005 | 0.002 | 0.040 | 0.070 | 0.010 | 0.039857 |
| 26 | 01NS01DA0005 | 0.002 | 0.100 | 0.100 | 0.020 | 0.054801 |
| 27 | 01NS01DA0005 | 0.002 | 0.100 | 0.093 | 0.020 | 0.054801 |
| 28 | 01NS01DA0005 | 0.002 | 0.010 | 0.100 | 0.020 | 0.053030 |
| 29 | 01NS01DA0006 | 0.002 | 0.120 | 0.050 | 0.010 | 0.041753 |
| 30 | 01NS01DA0006 | 0.002 | 0.058 | 0.060 | 0.010 | 0.042099 |
| 31 | 01NS01DA0006 | 0.002 | 0.087 | 0.050 | 0.020 | 0.039467 |
| 32 | 01NS01DA0006 | 0.002 | 0.100 | 0.040 | 0.010 | 0.036534 |
| 33 | 01NS01DA0006 | 0.002 | 0.085 | 0.050 | 0.010 | 0.038274 |
| 34 | 01NS01DA0006 | 0.002 | 0.040 | | 0.010 | 0.033676 |
| 35 | 01NS01DA0006 | 0.002 | 0.080 | 0.056 | 0.010 | 0.043890 |
| 36 | 01NS01DA0006 | 0.002 | 0.090 | 0.051 | 0.020 | 0.045049 |
| 37 | 01NS01DA0006 | 0.002 | 0.090 | | 0.020 | 0.043890 |
| 38 | 01NS01DA0007 | 0.002 | 0.230 | 0.230 | 0.020 | 0.091764 |
| 39 | 01NS01DA0007 | 0.002 | 0.100 | 0.180 | 0.020 | 0.078903 |
| 40 | 01NS01DA0007 | 0.002 | 0.210 | 0.130 | 0.020 | 0.097165 |
| 41 | 01NS01DA0007 | 0.002 | 0.200 | 0.130 | 0.010 | 0.083915 |
| 42 | 01NS01DA0007 | 0.002 | 0.220 | 0.130 | 0.020 | 0.086565 |
| 43 | 01NS01DA0007 | 0.002 | 0.092 | 0.170 | 0.020 | 0.080790 |
| 44 | 01NS01DA0007 | 0.002 | 0.040 | 0.084 | 0.030 | 0.056068 |
| 45 | 01NS01EA0002 | 0.002 | 0.065 | | 0.020 | 0.032185 |
| 46 | 01NS01EA0002 | 0.002 | 0.025 | | 0.010 | 0.024733 |
| 47 | 01NS01EA0002 | 0.002 | 0.047 | 0.050 | 0.010 | 0.026515 |
| 48 | 01NS01EA0002 | 0.002 | 0.022 | | 0.020 | 0.023289 |
| 49 | 01NS01EA0002 | 0.002 | 0.022 | 0.050 | 0.020 | 0.024184 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| | 0 NAQUADAT NUMBER | 1 LAKE # | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 01NS01EA0002 | 7 | 402750 | 16-OCT-84 | 1234 | T244 | 13.0 | 5.5 | 5.8 | 25.0 | 49 |
| 51 | 01NS01EA0002 | 7 | 500606 | 02-JUN-85 | 1538 | 244 | | 6.2 | 5.7 | 50.0 | 50 |
| 52 | 01NS01EA0002 | 7 | 501859 | 22-OCT-85 | 1025 | 244 | | 5.6 | 5.8 | 50.0 | 51 |
| 53 | 01NS01EA0004 | 8 | 300698 | 26-MAY-83 | 1201 | 244 | | | 5.9 | | 46 |
| 54 | 01NS01EA0004 | 8 | 302306 | 18-OCT-83 | 1520 | 244 | 14.0 | | 5.9 | 45.0 | 48 |
| 55 | 01NS01EA0004 | 8 | 400355 | 02-MAY-84 | 1130 | 244 | 10.6 | 5.8 | 5.7 | 52.0 | 46 |
| 56 | 01NS01EA0004 | 8 | 402751 | 16-OCT-84 | 1147 | 244 | 12.0 | 6.0 | 6.4 | 25.0 | 48 |
| 57 | 01NS01EA0004 | 8 | 500607 | 02-JUN-85 | 1356 | 244 | | 6.1 | 6.0 | 46.0 | 50 |
| 58 | 01NS01EA0004 | 8 | 501860 | 22-OCT-85 | 1015 | 244 | | 5.6 | 6.3 | 50.0 | 52 |
| 59 | 01NS01EA0005 | 9 | 300699 | 26-MAY-83 | 1201 | 244 | | | 6.1 | | 69 |
| 60 | 01NS01EA0005 | 9 | 302297 | 18-OCT-83 | 1410 | 244 | 13.5 | | 6.1 | 78.0 | 78 |
| 61 | 01NS01EA0005 | 9 | 400356 | 02-MAY-84 | 1410 | 244 | 10.8 | 5.7 | 5.7 | 56.0 | 62 |
| 62 | 01NS01EA0005 | 9 | 402752 | 16-OCT-84 | 1540 | 244 | 12.0 | 6.4 | 6.6 | 35.0 | 69 |
| 63 | 01NS01EA0005 | 9 | 500608 | 02-JUN-85 | 1315 | 244 | | 6.2 | 6.1 | 90.0 | 96 |
| 64 | 01NS01EA0009 | 10 | 300700 | 26-MAY-83 | 1201 | 244 | | | 4.8 | | 50 |
| 65 | 01NS01EA0009 | 10 | 302299 | 18-OCT-83 | 1420 | 244 | 12.5 | | 5.2 | | 52 |
| 66 | 01NS01EA0009 | 10 | 400357 | 02-MAY-84 | 1201 | 244 | 11.5 | 4.6 | 4.6 | 50.0 | 46 |
| 67 | 01NS01EA0009 | 10 | 402753 | 16-OCT-84 | 1240 | 244 | 11.0 | 5.9 | 5.5 | 26.0 | 52 |
| 68 | 01NS01EA0009 | 10 | 500609 | 02-JUN-85 | 1545 | 244 | | 4.7 | 4.8 | 70.0 | 68 |
| 69 | 01NS01EA0010 | 11 | 300692 | 26-MAY-83 | 1201 | 244 | | | 6.2 | | 64 |
| 70 | 01NS01EA0010 | 11 | 302295 | 18-OCT-83 | 1400 | 244 | 14.0 | | 5.9 | 68.0 | 67 |
| 71 | 01NS01EA0010 | 11 | 400345 | 02-MAY-84 | 1430 | 244 | 11.5 | 6.1 | 5.9 | | 64 |
| 72 | 01NS01EA0010 | 11 | 400346 | 02-MAY-84 | 1431 | 244 | 11.5 | 6.1 | 6.0 | 74.0 | 63 |
| 73 | 01NS01EA0010 | 11 | 400347 | 02-MAY-84 | 1432 | 244 | 11.5 | 6.1 | 5.9 | 74.0 | 63 |
| 74 | 01NS01EA0010 | 11 | 402741 | 16-OCT-84 | 1522 | 244 | 12.0 | 6.3 | 6.6 | 32.0 | 64 |
| 75 | 01NS01EA0010 | 11 | 500601 | 02-JUN-85 | 1550 | 244 | | 6.5 | 6.4 | 66.0 | 67 |
| 76 | 01NS01EA0010 | 11 | 501852 | 22-OCT-85 | 1110 | 244 | | 5.6 | 6.5 | 64.0 | 66 |
| 77 | 01NS01EA0011 | 12 | 300693 | 26-MAY-83 | 1201 | 244 | | | 6.7 | | 96 |
| 78 | 01NS01EA0011 | 12 | 302298 | 18-OCT-83 | 1415 | 244 | 13.5 | | 6.1 | 96.0 | 93 |
| 79 | 01NS01EA0011 | 12 | 400348 | 02-MAY-84 | 1435 | 244 | 10.0 | 6.3 | 6.2 | 106.0 | 96 |
| 80 | 01NS01EA0011 | 12 | 400349 | 02-MAY-84 | 1436 | 244 | 10.0 | 6.3 | 6.2 | 106.0 | 96 |
| 81 | 01NS01EA0011 | 12 | 400350 | 02-MAY-84 | 1437 | 244 | 10.0 | 6.3 | 6.3 | 106.0 | 96 |
| 82 | 01NS01EA0011 | 12 | 402742 | 16-OCT-84 | 1310 | 244 | 12.0 | 6.3 | 7.0 | 27.0 | 94 |
| 83 | 01NS01EA0011 | 12 | 500602 | 02-JUN-85 | 1326 | 244 | | 6.5 | 6.8 | 106.0 | 114 |
| 84 | 01NS01EA0011 | 12 | 501853 | 22-OCT-85 | 1045 | 244 | | 5.9 | 6.9 | 110.0 | 113 |
| 85 | 01NS01EA0013 | 13 | 300694 | 26-MAY-83 | 1201 | 244 | | | 6.2 | | 76 |
| 86 | 01NS01EA0013 | 13 | 302296 | 18-OCT-83 | 1405 | 244 | 14.0 | | 6.1 | 80.0 | 80 |
| 87 | 01NS01EA0013 | 13 | 400351 | 02-MAY-84 | 1405 | 244 | 11.0 | 5.9 | 5.8 | 56.0 | 68 |
| 88 | 01NS01EA0013 | 13 | 402743 | 16-OCT-84 | 1535 | 244 | 12.0 | 6.1 | 6.8 | 39.0 | 75 |
| 89 | 01NS01EA0013 | 13 | 500603 | 02-JUN-85 | 1310 | 244 | | 6.4 | 6.4 | 90.0 | 104 |
| 90 | 01NS01EA0013 | 13 | 501854 | 22-OCT-85 | 1100 | 244 | | 5.8 | 6.6 | 92.0 | 92 |
| 91 | 01NS01EA0014 | 14 | 300695 | 26-MAY-83 | 1201 | 244 | | | 6.7 | | 86 |
| 92 | 01NS01EA0014 | 14 | 302302 | 18-OCT-83 | 1440 | 244 | 13.2 | | 6.1 | 87.0 | 88 |
| 93 | 01NS01EA0014 | 14 | 400352 | 02-MAY-84 | 1445 | 244 | 10.5 | 6.5 | 6.2 | 96.0 | 87 |
| 94 | 01NS01EA0014 | 14 | 402744 | 16-OCT-84 | 1320 | 244 | 12.0 | 6.3 | 7.1 | 24.0 | 83 |
| 95 | 01NS01EA0014 | 14 | 500604 | 02-JUN-85 | 1340 | 244 | | 6.6 | 6.9 | 101.0 | 107 |
| 96 | 01NS01EA0014 | 14 | 501855 | 22-OCT-85 | 1039 | T244 | | 6.0 | 6.9 | 110.0 | 106 |
| 97 | 01NS01EA0014 | 14 | 501856 | 22-OCT-85 | 1040 | T244 | | | 7.0 | | 106 |
| 98 | 01NS01EA0014 | 14 | 501857 | 22-OCT-85 | 1041 | T244 | | | 7.0 | | 106 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 50 01NS01EA0002 | 0.5 | 5 | | 0.4 | 1.00 | 0.86 | 0.35 | 5.6 | 10.0 |
| 51 01NS01EA0002 | 0.5 | 5 | | 0.5 | 0.90 | 0.90 | 0.40 | 5.5 | 10.3 |
| 52 01NS01EA0002 | 0.3 | 5 | | 0.4 | 1.10 | 0.95 | 0.41 | 6.0 | 10.6 |
| 53 01NS01EA0004 | | 30 | | 1.0 | 1.35 | | 0.40 | 5.0 | 8.6 |
| 54 01NS01EA0004 | 0.4 | 5 | | 2.0 | 1.30 | 0.97 | 0.50 | 5.4 | 9.0 |
| 55 01NS01EA0004 | 0.4 | 20 | | 1.0 | 1.20 | 0.95 | 0.40 | 5.0 | 9.4 |
| 56 01NS01EA0004 | 0.4 | 5 | 1.8 | | 1.30 | 0.92 | 0.41 | 5.2 | 8.9 |
| 57 01NS01EA0004 | 0.4 | 5 | | 1.3 | 1.30 | 1.10 | 0.44 | 5.2 | 9.9 |
| 58 01NS01EA0004 | 0.3 | 20 | 1.6 | | 1.40 | 1.10 | 0.51 | 5.7 | 10.4 |
| 59 01NS01EA0005 | | 180 | | | 2.55 | | 0.70 | 8.2 | 12.2 |
| 60 01NS01EA0005 | 0.9 | 160 | 4.9 | | 3.10 | 1.50 | 0.90 | 9.5 | 12.9 |
| 61 01NS01EA0005 | 0.7 | 120 | | 2.1 | 1.90 | 1.00 | 0.70 | 7.3 | 11.6 |
| 62 01NS01EA0005 | 1.1 | 160 | 4.3 | | 2.90 | 1.40 | 0.80 | 7.8 | 11.2 |
| 63 01NS01EA0005 | 0.6 | 100 | 2.4 | | 3.00 | 1.75 | 0.95 | 10.6 | 21.0 |
| 64 01NS01EA0009 | | 220 | | -0.2 | 1.25 | | 0.30 | 5.7 | 8.0 |
| 65 01NS01EA0009 | 0.9 | 220 | | 0.9 | 1.40 | 1.00 | 0.50 | 6.6 | 8.4 |
| 66 01NS01EA0009 | 0.7 | 160 | | -0.2 | 1.00 | 0.77 | 0.30 | 5.0 | 7.7 |
| 67 01NS01EA0009 | 1.4 | 180 | | 1.2 | 1.50 | 0.98 | 0.40 | 6.0 | 9.5 |
| 68 01NS01EA0009 | 0.7 | 160 | | -0.1 | 1.60 | 1.10 | 0.46 | 7.3 | 13.1 |
| 69 01NS01EA0010 | | 30 | | | 1.80 | | 0.50 | 7.3 | 12.1 |
| 70 01NS01EA0010 | 0.7 | 5 | | 3.7 | 2.00 | 1.30 | 0.60 | 8.0 | 13.1 |
| 71 01NS01EA0010 | 0.6 | 40 | | 2.0 | 1.70 | 0.67 | 0.50 | 7.2 | 12.4 |
| 72 01NS01EA0010 | 0.6 | 40 | | 2.1 | 1.70 | 0.73 | 0.50 | 7.1 | 13.2 |
| 73 01NS01EA0010 | 0.6 | 40 | | 2.1 | 1.70 | 0.74 | 0.50 | 6.8 | 12.5 |
| 74 01NS01EA0010 | 0.6 | 25 | 3.1 | | 1.80 | 1.20 | 0.50 | 7.2 | 11.2 |
| 75 01NS01EA0010 | 0.5 | 10 | 2.5 | | 1.90 | 1.30 | 0.56 | 7.6 | 13.3 |
| 76 01NS01EA0010 | 0.6 | 25 | 3.5 | | 2.00 | 1.40 | 0.54 | 7.6 | 12.9 |
| 77 01NS01EA0011 | | 10 | 4.4 | | 2.80 | | 0.80 | 11.3 | 20.0 |
| 78 01NS01EA0011 | 0.3 | 5 | 4.4 | | 2.60 | 1.60 | 0.90 | 11.9 | 20.0 |
| 79 01NS01EA0011 | 0.6 | 20 | 3.8 | | 2.70 | 1.70 | 0.70 | 11.3 | 21.0 |
| 80 01NS01EA0011 | 0.6 | 20 | 3.8 | | 2.70 | 1.70 | 0.70 | 10.8 | 21.0 |
| 81 01NS01EA0011 | 0.6 | 20 | 3.8 | | 2.70 | 1.70 | 0.70 | 11.4 | 21.0 |
| 82 01NS01EA0011 | 0.3 | 5 | 5.8 | | 2.80 | 1.70 | 0.75 | 11.3 | 18.0 |
| 83 01NS01EA0011 | 0.4 | 5 | 5.1 | | 3.00 | 2.20 | 0.90 | 13.7 | 26.0 |
| 84 01NS01EA0011 | 0.3 | 10 | 6.1 | | 3.20 | 2.10 | 0.93 | 14.0 | 25.0 |
| 85 01NS01EA0013 | | 120 | | | 2.60 | | 0.80 | 8.8 | 13.2 |
| 86 01NS01EA0013 | 0.8 | 100 | 6.5 | | 3.10 | 1.50 | 0.90 | 9.8 | 14.6 |
| 87 01NS01EA0013 | 0.8 | 110 | | 2.4 | 2.10 | 1.10 | 0.70 | 7.7 | 13.4 |
| 88 01NS01EA0013 | 1.0 | 120 | 5.3 | | 3.60 | 1.40 | 0.82 | 8.2 | 12.3 |
| 89 01NS01EA0013 | 0.7 | 70 | 3.0 | | 2.60 | 1.90 | 1.10 | 11.5 | 23.0 |
| 90 01NS01EA0013 | 0.9 | 140 | 4.8 | | 3.50 | 1.70 | 1.10 | 11.0 | 19.0 |
| 91 01NS01EA0014 | | 20 | 6.4 | | 3.20 | | 0.80 | 9.8 | 15.0 |
| 92 01NS01EA0014 | 0.5 | 5 | 8.1 | | 2.90 | 1.60 | 1.00 | 10.4 | 18.0 |
| 93 01NS01EA0014 | 0.5 | 20 | 4.1 | | 2.70 | 1.50 | 0.80 | 10.2 | 19.0 |
| 94 01NS01EA0014 | 0.5 | 10 | 7.5 | | 2.80 | 1.50 | 0.90 | 9.5 | 13.8 |
| 95 01NS01EA0014 | 0.4 | 5 | 6.0 | | 3.20 | 2.00 | 1.00 | 11.7 | 23.0 |
| 96 01NS01EA0014 | 0.4 | 10 | 7.3 | | 3.30 | 2.10 | 1.12 | 12.5 | 22.0 |
| 97 01NS01EA0014 | 0.3 | 10 | 7.4 | | 3.30 | 2.10 | 1.12 | 12.5 | 22.0 |
| 98 01NS01EA0014 | 0.3 | 10 | 7.3 | | 3.30 | 2.10 | 1.12 | 12.5 | 22.0 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P06107L | 23 P07110L | 24 P07601L | 25 P14102L | 26 P29305P | 27 P30304P | 28 P48302P |
|---|---|---|---|---|---|---|---|---|---|
| 50 01NS01EA0002 | 4.0 | | 2.6 | 0.01 | 0.10 | 0.2 | 0.002 | 0.01 | 0.001 |
| 51 01NS01EA0002 | 3.9 | | 3.1 | 0.01 | 0.11 | 0.4 | 0.002 | 0.01 | 0.001 |
| 52 01NS01EA0002 | 4.5 | | 2.7 | 0.01 | 0.10 | 0.6 | 0.002 | 0.01 | 0.001 |
| 53 01NS01EA0004 | 4.0 | 0.9 | 4.4 | 0.01 | 0.10 | | | 0.01 | 0.001 |
| 54 01NS01EA0004 | 3.8 | 3.7 | 4.1 | 0.02 | 0.08 | 1.7 | 0.004 | 0.02 | 0.001 |
| 55 01NS01EA0004 | 3.8 | | 5.0 | 0.02 | 0.08 | 2.2 | 0.002 | 0.01 | 0.001 |
| 56 01NS01EA0004 | 3.4 | | 3.6 | 0.01 | 0.10 | 1.4 | 0.002 | 0.01 | 0.001 |
| 57 01NS01EA0004 | 3.9 | | 4.4 | 0.02 | 0.11 | 0.9 | 0.003 | 0.01 | 0.001 |
| 58 01NS01EA0004 | 3.8 | | 3.8 | 0.01 | 0.10 | 0.8 | 0.002 | 0.01 | 0.001 |
| 59 01NS01EA0005 | 6.5 | 2.3 | 16.0 | 0.03 | 0.21 | | | 0.01 | 0.001 |
| 60 01NS01EA0005 | 6.9 | 5.3 | 16.0 | 0.10 | 0.31 | 3.4 | 0.002 | 0.02 | 0.001 |
| 61 01NS01EA0005 | 5.6 | 3.9 | 13.0 | 0.04 | 0.16 | 2.1 | 0.002 | 0.01 | 0.001 |
| 62 01NS01EA0005 | 6.1 | 3.8 | 19.0 | 0.05 | 0.23 | 3.4 | 0.002 | 0.01 | 0.001 |
| 63 01NS01EA0005 | 6.6 | 5.4 | 13.0 | 0.06 | 0.19 | 2.8 | 0.005 | 0.01 | 0.001 |
| 64 01NS01EA0009 | 6.9 | 3.7 | 19.0 | 0.01 | 0.15 | | | 0.01 | 0.001 |
| 65 01NS01EA0009 | 7.5 | 4.4 | 41.0 | 0.01 | 0.31 | 4.3 | 0.002 | 0.02 | 0.001 |
| 66 01NS01EA0009 | 5.2 | 3.4 | 15.0 | 0.01 | 0.11 | 1.7 | 0.002 | 0.01 | 0.001 |
| 67 01NS01EA0009 | 5.7 | 3.7 | 16.0 | 0.01 | 0.16 | 2.8 | 0.002 | 0.01 | 0.001 |
| 68 01NS01EA0009 | 6.6 | 4.5 | 16.0 | 0.03 | 0.16 | 1.9 | 0.002 | 0.01 | 0.001 |
| 69 01NS01EA0010 | 5.0 | 4.4 | 5.2 | 0.02 | 0.15 | | | 0.01 | 0.001 |
| 70 01NS01EA0010 | 4.4 | 4.4 | 5.6 | 0.04 | 0.15 | 1.4 | 0.003 | 0.02 | 0.001 |
| 71 01NS01EA0010 | 5.1 | 4.4 | 7.7 | 0.03 | 0.12 | 2.0 | 0.002 | 0.01 | 0.001 |
| 72 01NS01EA0010 | 5.0 | 4.4 | 6.6 | 0.04 | 0.12 | 2.1 | 0.002 | 0.01 | 0.001 |
| 73 01NS01EA0010 | 5.0 | 4.4 | 7.1 | 0.04 | 0.14 | 2.1 | 0.002 | 0.01 | 0.001 |
| 74 01NS01EA0010 | 5.2 | | 5.2 | 0.01 | 0.13 | 1.5 | 0.002 | 0.01 | 0.001 |
| 75 01NS01EA0010 | 4.9 | | 5.7 | 0.01 | 0.12 | 1.1 | 0.002 | 0.01 | 0.001 |
| 76 01NS01EA0010 | 4.6 | | 6.0 | 0.02 | 0.12 | 1.2 | 0.002 | 0.01 | 0.001 |
| 77 01NS01EA0011 | 5.5 | 5.3 | 5.8 | 0.03 | 0.15 | | | 0.01 | 0.001 |
| 78 01NS01EA0011 | 6.0 | 6.0 | 5.6 | 0.07 | 0.17 | 1.1 | 0.002 | 0.02 | 0.001 |
| 79 01NS01EA0011 | 5.8 | | 5.7 | 0.06 | 0.13 | 1.1 | 0.002 | 0.01 | 0.001 |
| 80 01NS01EA0011 | 6.0 | | 5.4 | 0.06 | 0.14 | 1.1 | 0.002 | 0.01 | 0.001 |
| 81 01NS01EA0011 | 6.0 | | 6.0 | 0.06 | 0.12 | 1.2 | | | |
| 82 01NS01EA0011 | 5.1 | | 4.6 | 0.01 | 0.12 | 0.9 | 0.002 | 0.01 | 0.001 |
| 83 01NS01EA0011 | 6.1 | | 5.0 | 0.02 | 0.13 | 0.3 | 0.002 | 0.01 | 0.001 |
| 84 01NS01EA0011 | 6.0 | | 4.6 | 0.01 | 0.10 | 0.9 | 0.002 | 0.01 | 0.001 |
| 85 01NS01EA0013 | 6.5 | 2.1 | 12.0 | 0.06 | 0.21 | | | 0.01 | 0.001 |
| 86 01NS01EA0013 | 5.7 | 4.5 | 13.0 | 0.20 | 0.34 | 4.0 | 0.003 | 0.02 | 0.001 |
| 87 01NS01EA0013 | 5.8 | 4.4 | 13.0 | 0.05 | 0.15 | 2.1 | 0.002 | 0.01 | 0.001 |
| 88 01NS01EA0013 | 5.1 | 3.3 | 15.0 | 0.03 | 0.22 | 2.6 | 0.002 | 0.01 | 0.001 |
| 89 01NS01EA0013 | 6.6 | 5.9 | 9.9 | 0.12 | 0.27 | 2.6 | 0.002 | 0.01 | 0.001 |
| 90 01NS01EA0013 | 6.2 | 4.0 | 15.0 | 0.11 | 0.32 | 3.3 | 0.002 | 0.01 | 0.001 |
| 91 01NS01EA0014 | 5.1 | 5.0 | 6.2 | 0.01 | 0.15 | | | 0.01 | 0.001 |
| 92 01NS01EA0014 | 4.4 | 4.5 | 5.9 | 0.06 | 0.16 | 3.0 | 0.002 | 0.01 | 0.001 |
| 93 01NS01EA0014 | 5.5 | | 5.6 | 0.04 | 0.13 | 1.3 | 0.002 | 0.01 | 0.001 |
| 94 01NS01EA0014 | 4.1 | | 4.9 | 0.01 | 0.15 | 1.9 | 0.002 | 0.01 | 0.001 |
| 95 01NS01EA0014 | 5.6 | | 5.1 | 0.06 | 0.19 | 0.6 | 0.002 | 0.01 | 0.001 |
| 96 01NS01EA0014 | 5.3 | | 4.8 | 0.02 | 0.13 | 1.5 | 0.002 | 0.01 | 0.001 |
| 97 01NS01EA0014 | 5.3 | | 4.9 | 0.01 | 0.13 | 1.4 | 0.002 | 0.01 | 0.001 |
| 98 01NS01EA0014 | 5.5 | | 4.3 | 0.01 | 0.13 | 1.4 | 0.002 | 0.01 | 0.001 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| | 0 NAQUADAT NUMBER | 29 PB2302P | 30 P13305P | 31 P26304P | 32 P25304P | 33 ORGANIC ANION MEQ/L |
|---|---|---|---|---|---|---|
| 50 | 01NS01EA0002 | 0.002 | 0.022 | | 0.020 | 0.023289 |
| 51 | 01NS01EA0002 | 0.002 | 0.050 | | 0.010 | 0.027383 |
| 52 | 01NS01EA0002 | 0.002 | 0.023 | | 0.020 | 0.024184 |
| 53 | 01NS01EA0004 | 0.002 | 0.110 | 0.070 | 0.010 | 0.039912 |
| 54 | 01NS01EA0004 | 0.002 | 0.028 | 0.050 | 0.020 | 0.037191 |
| 55 | 01NS01EA0004 | 0.002 | 0.080 | 0.040 | 0.010 | 0.044166 |
| 56 | 01NS01EA0004 | 0.002 | 0.022 | | 0.020 | 0.034203 |
| 57 | 01NS01EA0004 | 0.002 | 0.050 | | 0.010 | 0.040369 |
| 58 | 01NS01EA0004 | 0.002 | 0.025 | 0.057 | 0.017 | 0.035840 |
| 59 | 01NS01EA0005 | 0.002 | 0.290 | 0.530 | 0.020 | 0.148306 |
| 60 | 01NS01EA0005 | 0.002 | 0.290 | 0.720 | 0.020 | 0.148306 |
| 61 | 01NS01EA0005 | 0.002 | 0.210 | 0.350 | 0.020 | 0.114831 |
| 62 | 01NS01EA0005 | 0.002 | 0.310 | 0.930 | 0.030 | 0.182739 |
| 63 | 01NS01EA0005 | 0.002 | 0.210 | 0.450 | 0.020 | 0.120499 |
| 64 | 01NS01EA0009 | 0.002 | 0.350 | 0.650 | 0.020 | 0.137711 |
| 65 | 01NS01EA0009 | 0.002 | 0.400 | 0.830 | 0.020 | 0.330168 |
| 66 | 01NS01EA0009 | 0.002 | 0.240 | 0.360 | 0.020 | 0.101991 |
| 67 | 01NS01EA0009 | 0.002 | 0.330 | 0.730 | 0.020 | 0.136853 |
| 68 | 01NS01EA0009 | 0.002 | 0.320 | 0.580 | 0.020 | 0.115967 |
| 69 | 01NS01EA0010 | 0.002 | 0.100 | 0.110 | 0.020 | 0.048644 |
| 70 | 01NS01EA0010 | 0.002 | 0.028 | 0.240 | 0.100 | 0.050797 |
| 71 | 01NS01EA0010 | 0.002 | 0.100 | 0.120 | 0.020 | 0.069846 |
| 72 | 01NS01EA0010 | 0.002 | 0.100 | 0.120 | 0.020 | 0.060553 |
| 73 | 01NS01EA0010 | 0.002 | 0.110 | 0.120 | 0.020 | 0.064403 |
| 74 | 01NS01EA0010 | 0.002 | 0.038 | 0.200 | 0.050 | 0.050013 |
| 75 | 01NS01EA0010 | 0.002 | 0.070 | 0.080 | 0.010 | 0.054154 |
| 76 | 01NS01EA0010 | 0.002 | 0.047 | 0.330 | 0.084 | 0.057376 |
| 77 | 01NS01EA0011 | 0.002 | 0.075 | 0.060 | 0.010 | 0.056068 |
| 78 | 01NS01EA0011 | 0.002 | 0.010 | | 0.020 | 0.051907 |
| 79 | 01NS01EA0011 | 0.002 | 0.088 | 0.060 | 0.010 | 0.053321 |
| 80 | 01NS01EA0011 | 0.002 | 0.088 | 0.070 | 0.010 | 0.050515 |
| 81 | 01NS01EA0011 | | | | | 0.056589 |
| 82 | 01NS01EA0011 | 0.002 | 0.010 | | 0.010 | 0.045000 |
| 83 | 01NS01EA0011 | 0.002 | 0.050 | | 0.010 | 0.048552 |
| 84 | 01NS01EA0011 | 0.002 | 0.010 | | 0.014 | 0.044844 |
| 85 | 01NS01EA0013 | 0.002 | 0.230 | 0.380 | 0.020 | 0.112255 |
| 86 | 01NS01EA0013 | 0.002 | 0.180 | 0.590 | 0.020 | 0.120499 |
| 87 | 01NS01EA0013 | 0.002 | 0.220 | 0.310 | 0.020 | 0.116443 |
| 88 | 01NS01EA0013 | 0.002 | 0.220 | 0.720 | 0.020 | 0.145655 |
| 89 | 01NS01EA0013 | 0.002 | 0.180 | 0.350 | 0.020 | 0.094057 |
| 90 | 01NS01EA0013 | 0.002 | 0.210 | 0.750 | 0.032 | 0.144268 |
| 91 | 01NS01EA0014 | 0.004 | 0.075 | 0.120 | 0.010 | 0.059935 |
| 92 | 01NS01EA0014 | 0.002 | 0.010 | 0.080 | 0.040 | 0.054688 |
| 93 | 01NS01EA0014 | 0.002 | 0.088 | 0.070 | 0.020 | 0.052385 |
| 94 | 01NS01EA0014 | 0.002 | 0.010 | 0.110 | 0.040 | 0.048080 |
| 95 | 01NS01EA0014 | 0.002 | 0.040 | 0.080 | 0.030 | 0.049718 |
| 96 | 01NS01EA0014 | 0.002 | 0.010 | 0.059 | 0.033 | 0.046794 |
| 97 | 01NS01EA0014 | 0.002 | 0.010 | 0.053 | 0.037 | 0.047934 |
| 98 | 01NS01EA0014 | 0.002 | 0.010 | 0.054 | 0.036 | 0.042065 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| | 0 NAQUADAT NUMBER | 1 LAKE # | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 99 | 01NS01EA0016 | 15 | 300696 | 26-MAY-83 | 1201 | 244 | | | 6.3 | | 71 |
| 100 | 01NS01EA0016 | 15 | 302300 | 18-OCT-83 | 1425 | 244 | 11.5 | | 6.0 | 72.0 | 75 |
| 101 | 01NS01EA0016 | 15 | 400353 | 02-MAY-84 | 1215 | 244 | 12.0 | 6.0 | 5.9 | 53.0 | 68 |
| 102 | 01NS01EA0016 | 15 | 402745 | 16-OCT-84 | 1300 | T244 | 12.0 | 6.3 | 6.9 | 21.0 | 70 |
| 103 | 01NS01EA0016 | 15 | 402746 | 16-OCT-84 | 1302 | T244 | 12.0 | 6.2 | 6.9 | 21.0 | 70 |
| 104 | 01NS01EA0016 | 15 | 402747 | 16-OCT-84 | 1304 | T244 | 12.0 | 6.2 | 7.0 | 21.0 | 70 |
| 105 | 01NS01EA0016 | 15 | 500605 | 02-JUN-85 | 1331 | 244 | | 6.3 | 6.3 | 88.0 | 92 |
| 106 | 01NS01EA0016 | 15 | 501858 | 22-OCT-85 | 1035 | 244 | | 6.2 | 6.7 | 90.0 | 89 |
| 107 | 01NS01EA0019 | 16 | 300707 | 26-MAY-83 | 1201 | 244 | | | 4.8 | | 35 |
| 108 | 01NS01EA0019 | 16 | 302310 | 18-OCT-83 | 1540 | 244 | 12.5 | | 5.0 | 34.0 | 36 |
| 109 | 01NS01EA0019 | 16 | 400368 | 02-MAY-84 | 1030 | 244 | 11.5 | 4.6 | 4.8 | 38.0 | 36 |
| 110 | 01NS01EA0019 | 16 | 402762 | 16-OCT-84 | 1612 | 244 | 12.0 | 4.9 | 5.0 | 10.0 | 38 |
| 111 | 01NS01EA0019 | 16 | 500620 | 02-JUN-85 | 1520 | 244 | | 5.0 | 4.7 | 45.0 | 46 |
| 112 | 01NS01EA0019 | 16 | 501872 | 22-OCT-85 | 941 | T244 | | | 5.0 | | 43 |
| 113 | 01NS01EA0019 | 16 | 501873 | 22-OCT-85 | 942 | T244 | | | 5.0 | | 43 |
| 114 | 01NS01EA0020 | 17 | 300708 | 26-MAY-83 | 1201 | 244 | | | 6.5 | | 45 |
| 115 | 01NS01EA0020 | 17 | 302311 | 18-OCT-83 | 1545 | 244 | 14.8 | | 5.9 | 44.0 | 46 |
| 116 | 01NS01EA0020 | 17 | 400369 | 02-MAY-84 | 1140 | 244 | 10.2 | 6.4 | 6.2 | 46.0 | 44 |
| 117 | 01NS01EA0020 | 17 | 402763 | 16-OCT-84 | 1558 | 244 | 13.0 | 6.4 | 6.7 | 23.0 | 46 |
| 118 | 01NS01EA0020 | 17 | 500621 | 02-JUN-85 | 1530 | T244 | | 6.7 | 6.6 | 4.7 | 49 |
| 119 | 01NS01EA0020 | 17 | 500622 | 02-JUN-85 | 1532 | T244 | | | 6.6 | | 49 |
| 120 | 01NS01EA0020 | 17 | 500623 | 02-JUN-85 | 1534 | T244 | | | 6.6 | | 49 |
| 121 | 01NS01ED0001 | 18 | 300665 | 26-MAY-83 | 1201 | 244 | | | 5.3 | | 23 |
| 122 | 01NS01ED0001 | 18 | 302283 | 18-OCT-83 | 1130 | 244 | 13.0 | | 5.5 | 20.0 | 23 |
| 123 | 01NS01ED0001 | 18 | 400316 | 03-MAY-84 | 945 | 244 | 10.0 | 5.3 | 5.3 | | 23 |
| 124 | 01NS01ED0001 | 18 | 402700 | 17-OCT-84 | 1235 | 244 | 11.0 | 5.6 | 5.5 | | 23 |
| 125 | 01NS01ED0001 | 18 | 500566 | 03-JUN-85 | 1138 | T244 | | 5.3 | 5.3 | 25.0 | 24 |
| 126 | 01NS01ED0001 | 18 | 500567 | 03-JUN-85 | 1140 | T244 | | | 5.3 | | 24 |
| 127 | 01NS01ED0001 | 18 | 500568 | 03-JUN-85 | 1142 | T244 | | | 5.3 | | 24 |
| 128 | 01NS01ED0001 | 18 | 501818 | 23-OCT-85 | 924 | 244 | | | 5.5 | 22.0 | 24 |
| 129 | 01NS01ED0002 | 19 | 300666 | 26-MAY-83 | 1201 | 244 | | | 5.0 | | 27 |
| 130 | 01NS01ED0002 | 19 | 302271 | 18-OCT-83 | 1030 | 244 | 13.0 | | 5.3 | 25.0 | 28 |
| 131 | 01NS01ED0002 | 19 | 400317 | 02-MAY-84 | 1605 | 244 | 10.5 | 4.7 | 4.8 | 42.0 | 28 |
| 132 | 01NS01ED0002 | 19 | 402701 | 17-OCT-84 | 820 | 244 | 11.0 | 5.1 | 5.2 | | 31 |
| 133 | 01NS01ED0002 | 19 | 500569 | 03-JUN-85 | 915 | 244 | | 4.9 | 4.9 | 32.0 | 31 |
| 134 | 01NS01ED0002 | 19 | 501819 | 22-OCT-85 | 1325 | 244 | | 4.8 | 5.2 | 30.0 | 30 |
| 135 | 01NS01ED0003 | 20 | 300667 | 26-MAY-83 | 1201 | 244 | | | 5.9 | | 24 |
| 136 | 01NS01ED0003 | 20 | 302270 | 18-OCT-83 | 1025 | 244 | 13.5 | | 5.8 | 22.0 | 26 |
| 137 | 01NS01ED0003 | 20 | 400318 | 02-MAY-84 | 1600 | 244 | 11.5 | 5.5 | 5.8 | 42.0 | 26 |
| 138 | 01NS01ED0003 | 20 | 402702 | 17-OCT-84 | 825 | 244 | 11.0 | 5.7 | 6.1 | | 26 |
| 139 | 01NS01ED0003 | 20 | 500570 | 03-JUN-85 | 910 | 244 | | 5.8 | 5.8 | 28.0 | 26 |
| 140 | 01NS01ED0003 | 20 | 501821 | 12-OCT-85 | 1321 | 244 | | | 6.1 | | 27 |
| 141 | 01NS01ED0003 | 20 | 501820 | 22-OCT-85 | 1320 | 244 | | 5.0 | 6.1 | 22.0 | 27 |
| 142 | 01NS01ED0003 | 20 | 501822 | 22-OCT-85 | 1322 | T244 | | | 6.1 | | 27 |
| 143 | 01NS01ED0004 | 21 | 300668 | 26-MAY-83 | 1201 | 244 | | | 5.1 | | 23 |
| 144 | 01NS01ED0004 | 21 | 302279 | 18-OCT-83 | 1110 | 244 | 14.5 | | 5.4 | 20.0 | 22 |
| 145 | 01NS01ED0004 | 21 | 400319 | 03-MAY-84 | 915 | 244 | 9.5 | 5.0 | 5.0 | 27.0 | 24 |
| 146 | 01NS01ED0004 | 21 | 402703 | 17-OCT-84 | 1220 | 244 | 11.0 | 5.5 | 5.3 | | 23 |
| 147 | 01NS01ED0004 | 21 | 500571 | 03-JUN-85 | 1150 | 244 | | 5.2 | 5.2 | 26.0 | 24 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 99 01NS01EA0016 | | 35 | | | 2.10 | | 0.60 | 8.5 | 13.0 |
| 100 01NS01EA0016 | 0.5 | 5 | | 5.7 | 2.00 | 1.30 | 1.10 | 9.6 | 13.5 |
| 101 01NS01EA0016 | 0.7 | 50 | | 2.2 | 1.80 | 1.10 | 0.60 | 8.3 | 13.9 |
| 102 01NS01EA0016 | 0.5 | 10 | 5.4 | | 1.90 | 1.20 | 0.62 | 8.6 | 12.3 |
| 103 01NS01EA0016 | 0.6 | 10 | 5.4 | | 1.80 | 1.20 | 0.62 | 8.5 | 12.5 |
| 104 01NS01EA0016 | 0.6 | 10 | 5.5 | | 1.90 | 1.20 | 0.62 | 8.6 | 11.8 |
| 105 01NS01EA0016 | 0.7 | 20 | 2.6 | | 2.40 | 1.70 | 0.77 | 10.7 | 21.0 |
| 106 01NS01EA0016 | 0.6 | 20 | 4.4 | | 2.10 | 1.60 | 0.81 | 11.3 | 20.0 |
| 107 01NS01EA0019 | | 130 | | -0.7 | 0.70 | | 0.10 | 3.6 | 4.9 |
| 108 01NS01EA0019 | 0.8 | 200 | | 0.1 | 0.65 | 0.66 | 0.20 | 4.1 | 4.7 |
| 109 01NS01EA0019 | 0.5 | 90 | | -0.4 | 0.63 | 0.55 | 0.20 | 3.6 | 5.6 |
| 110 01NS01EA0019 | 0.8 | 120 | | | 0.67 | 0.67 | 0.25 | 4.3 | 6.3 |
| 111 01NS01EA0019 | 0.5 | 90 | | -0.7 | 3.20 | 1.00 | 0.30 | 4.5 | 7.8 |
| 112 01NS01EA0019 | 0.7 | 140 | | -0.1 | 0.76 | 0.75 | 0.31 | 4.9 | 7.7 |
| 113 01NS01EA0019 | 0.6 | 120 | | -0.1 | 0.77 | 0.75 | 0.27 | 4.9 | 7.5 |
| 114 01NS01EA0020 | | 5 | | | 1.75 | | 0.30 | 4.7 | 7.6 |
| 115 01NS01EA0020 | 0.2 | 5 | | 3.5 | 1.70 | 0.97 | 0.30 | 4.9 | 7.5 |
| 116 01NS01EA0020 | 0.4 | 5 | 2.5 | | 1.50 | 0.87 | 0.30 | 4.6 | 7.9 |
| 117 01NS01EA0020 | 0.3 | 5 | 3.1 | | 1.60 | 0.96 | 0.27 | 4.7 | 7.1 |
| 118 01NS01EA0020 | 0.3 | 5 | 3.0 | | 1.60 | 1.50 | 0.30 | 4.9 | 9.1 |
| 119 01NS01EA0020 | 0.3 | 5 | 2.8 | | 1.60 | 1.50 | 0.30 | 4.9 | 9.2 |
| 120 01NS01EA0020 | 0.4 | 5 | 2.9 | | 1.60 | 1.50 | 0.30 | 4.9 | 9.2 |
| 121 01NS01ED0001 | | 15 | | -0.2 | 0.70 | | 0.20 | 2.3 | 3.8 |
| 122 01NS01ED0001 | 0.7 | 5 | | 0.3 | 0.50 | 0.35 | 0.20 | 2.6 | 4.1 |
| 123 01NS01ED0001 | 0.6 | 25 | | 0.3 | 0.61 | 0.31 | 0.20 | 2.4 | 3.8 |
| 124 01NS01ED0001 | 0.7 | 10 | | | 0.55 | 0.37 | 0.27 | 2.7 | 4.0 |
| 125 01NS01ED0001 | 0.7 | 5 | | 0.2 | 0.55 | 0.31 | 0.20 | 2.4 | 4.2 |
| 126 01NS01ED0001 | 0.6 | 5 | | 0.3 | 0.50 | 0.35 | 0.20 | 2.4 | 4.2 |
| 127 01NS01ED0001 | 0.6 | 5 | | 0.2 | 0.55 | 0.40 | 0.24 | 2.5 | 4.2 |
| 128 01NS01ED0001 | 0.5 | 5 | | 0.1 | 0.49 | 0.37 | 0.24 | 2.6 | 4.3 |
| 129 01NS01ED0002 | | 90 | | -0.3 | 0.75 | | 0.20 | 2.8 | 4.0 |
| 130 01NS01ED0002 | 0.7 | 100 | | 0.5 | 0.75 | 0.43 | 0.20 | 3.3 | 4.5 |
| 131 01NS01ED0002 | 0.5 | 80 | | -0.2 | 0.62 | 0.37 | 0.20 | 2.9 | 4.2 |
| 132 01NS01ED0002 | 1.0 | 140 | | 0.5 | 0.91 | 0.53 | 0.27 | 3.7 | 4.9 |
| 133 01NS01ED0002 | 0.5 | 70 | | -0.3 | 0.65 | 0.40 | 0.24 | 3.1 | 4.9 |
| 134 01NS01ED0002 | 0.6 | 80 | | 0.4 | 0.75 | 0.48 | 0.24 | 3.6 | 5.3 |
| 135 01NS01ED0003 | | 5 | | 0.6 | 0.75 | | 0.20 | 2.7 | 4.3 |
| 136 01NS01ED0003 | 0.9 | 5 | | 0.9 | 0.70 | 0.45 | 0.20 | 3.0 | 4.5 |
| 137 01NS01ED0003 | 0.5 | 15 | | 0.9 | 0.72 | 0.41 | 0.20 | 2.8 | 4.3 |
| 138 01NS01ED0003 | 0.9 | 10 | 0.9 | | 0.69 | 0.46 | 0.22 | 2.9 | 4.3 |
| 139 01NS01ED0003 | 0.5 | 5 | | 0.8 | 0.65 | 0.40 | 0.15 | 2.9 | 4.8 |
| 140 01NS01ED0003 | 0.8 | 5 | 1.0 | | 0.71 | 0.48 | 0.16 | 3.1 | 4.8 |
| 141 01NS01ED0003 | 0.7 | 5 | 1.0 | | 0.70 | 0.49 | 0.16 | 3.1 | 4.6 |
| 142 01NS01ED0003 | 0.8 | 5 | 1.0 | | 0.72 | 0.48 | 0.20 | 3.2 | 4.7 |
| 143 01NS01ED0004 | | 10 | | -0.4 | 0.50 | | 0.20 | 2.4 | 3.8 |
| 144 01NS01ED0004 | 0.5 | 5 | | 0.1 | 0.37 | 0.32 | 0.20 | 2.6 | 3.9 |
| 145 01NS01ED0004 | 0.5 | 25 | | 0.1 | 0.38 | 0.36 | 0.20 | 2.6 | 3.9 |
| 146 01NS01ED0004 | 0.7 | 10 | | -0.1 | 0.42 | 0.34 | 0.22 | 2.7 | 3.9 |
| 147 01NS01ED0004 | 0.4 | 5 | | -0.2 | 0.50 | 0.35 | 0.15 | 2.5 | 4.2 |

### APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| | 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P06107L | 23 P07110L | 24 P07601L | 25 P14102L | 26 P29305P | 27 P30304P | 28 P48302P |
|---|---|---|---|---|---|---|---|---|---|---|
| 99 | 01NS01EA0016 | 5.2 | 5.0 | 7.5 | 0.01 | 0.14 | | | 0.01 | 0.001 |
| 100 | 01NS01EA0016 | 4.6 | 4.8 | 6.0 | 0.02 | 0.14 | 1.9 | 0.002 | 0.01 | 0.001 |
| 101 | 01NS01EA0016 | 5.2 | 4.4 | 9.2 | 0.01 | 0.10 | 0.9 | 0.002 | 0.01 | 0.001 |
| 102 | 01NS01EA0016 | 3.5 | | 6.1 | 0.01 | 0.15 | 2.2 | 0.002 | 0.01 | 0.001 |
| 103 | 01NS01EA0016 | 3.5 | | 5.7 | 0.01 | 0.15 | 2.1 | 0.002 | 0.01 | 0.001 |
| 104 | 01NS01EA0016 | 3.5 | | 5.5 | 0.03 | 0.17 | 2.1 | 0.002 | 0.01 | 0.001 |
| 105 | 01NS01EA0016 | 5.8 | | 7.2 | 0.01 | 0.14 | 0.3 | 0.002 | 0.01 | 0.001 |
| 106 | 01NS01EA0016 | 4.7 | | 5.3 | 0.02 | 0.13 | 1.8 | 0.002 | 0.01 | 0.001 |
| 107 | 01NS01EA0019 | 4.7 | 3.0 | 10.3 | 0.01 | 0.11 | | | 0.01 | 0.001 |
| 108 | 01NS01EA0019 | 5.6 | 3.2 | 14.0 | 0.01 | 0.19 | 6.7 | 0.002 | 0.02 | 0.001 |
| 109 | 01NS01EA0019 | 4.1 | 3.0 | 9.4 | 0.01 | 0.10 | 1.9 | 0.002 | 0.01 | 0.001 |
| 110 | 01NS01EA0019 | 4.5 | 3.0 | 11.0 | 0.01 | 0.17 | 3.7 | 0.002 | 0.01 | 0.001 |
| 111 | 01NS01EA0019 | 4.7 | 3.6 | 10.0 | 0.01 | 0.10 | 0.8 | 0.002 | 0.01 | 0.001 |
| 112 | 01NS01EA0019 | 5.2 | 3.1 | 11.0 | 0.01 | 0.13 | 3.9 | 0.002 | 0.01 | 0.001 |
| 113 | 01NS01EA0019 | 4.8 | 3.1 | 11.0 | 0.02 | 0.15 | 3.9 | 0.002 | 0.01 | 0.001 |
| 114 | 01NS01EA0020 | 4.0 | 4.1 | 1.8 | 0.01 | 0.09 | | | 0.01 | 0.001 |
| 115 | 01NS01EA0020 | 4.0 | 4.2 | 2.6 | 0.01 | 0.10 | 1.2 | 0.002 | 0.01 | 0.001 |
| 116 | 01NS01EA0020 | 3.9 | | 2.6 | 0.01 | 0.05 | 1.8 | 0.002 | 0.01 | 0.001 |
| 117 | 01NS01EA0020 | 4.0 | | 2.2 | 0.01 | 0.10 | 0.7 | 0.002 | 0.01 | 0.001 |
| 118 | 01NS01EA0020 | 3.9 | | 2.8 | 0.01 | 0.10 | 0.7 | 0.006 | 0.01 | 0.001 |
| 119 | 01NS01EA0020 | 4.1 | | 2.6 | 0.01 | 0.10 | 0.7 | 0.002 | 0.01 | 0.001 |
| 120 | 01NS01EA0020 | 4.1 | | 3.0 | 0.01 | 0.10 | 0.7 | 0.002 | 0.01 | 0.001 |
| 121 | 01NS01ED0001 | 2.5 | 2.1 | 3.7 | 0.01 | 0.12 | | | 0.01 | 0.001 |
| 122 | 01NS01ED0001 | 2.2 | 2.4 | 2.7 | 0.01 | 0.11 | 0.9 | 0.002 | 0.02 | 0.001 |
| 123 | 01NS01ED0001 | 2.2 | | 3.9 | 0.01 | 0.08 | 1.8 | 0.002 | 0.01 | 0.001 |
| 124 | 01NS01ED0001 | 2.2 | | 2.5 | 0.01 | 0.14 | 0.3 | 0.002 | 0.01 | 0.001 |
| 125 | 01NS01ED0001 | 2.5 | | 4.3 | 0.01 | 0.10 | 0.6 | 0.002 | 0.01 | 0.001 |
| 126 | 01NS01ED0001 | 2.5 | | 4.2 | 0.01 | 0.10 | 0.6 | 0.002 | 0.01 | 0.001 |
| 127 | 01NS01ED0001 | 2.8 | | 4.1 | 0.01 | 0.10 | 0.6 | 0.005 | 0.01 | 0.001 |
| 128 | 01NS01ED0001 | 2.5 | | 2.7 | 0.01 | 0.11 | 0.7 | 0.002 | 0.01 | 0.001 |
| 129 | 01NS01ED0002 | 3.8 | 1.7 | 8.7 | 0.01 | 0.11 | | | 0.01 | 0.001 |
| 130 | 01NS01ED0002 | 3.3 | 2.0 | 9.7 | 0.01 | 0.14 | 1.8 | 0.002 | 0.02 | 0.001 |
| 131 | 01NS01ED0002 | 3.2 | 2.1 | 8.3 | 0.02 | 0.07 | 2.9 | 0.002 | 0.01 | 0.001 |
| 132 | 01NS01ED0002 | 3.7 | 1.8 | 14.0 | 0.01 | 0.10 | 3.7 | 0.002 | 0.01 | 0.001 |
| 133 | 01NS01ED0002 | 3.6 | 2.2 | 9.0 | 0.01 | 0.10 | 2.0 | 0.002 | 0.01 | 0.001 |
| 134 | 01NS01ED0002 | 3.2 | 1.6 | 9.4 | 0.01 | 0.11 | 2.2 | 0.002 | 0.01 | 0.001 |
| 135 | 01NS01ED0003 | 2.7 | 2.1 | 3.1 | 0.01 | 0.06 | | | 0.01 | 0.001 |
| 136 | 01NS01ED0003 | 2.5 | 2.5 | 4.0 | 0.02 | 0.10 | 1.6 | 0.002 | 0.02 | 0.001 |
| 137 | 01NS01ED0003 | 2.2 | | 3.5 | 0.01 | 0.05 | 2.8 | 0.002 | 0.01 | 0.001 |
| 138 | 01NS01ED0003 | 2.5 | | 2.7 | 0.01 | 0.10 | 1.4 | 0.002 | 0.01 | 0.001 |
| 139 | 01NS01ED0003 | 2.6 | | 3.2 | 0.01 | 0.10 | 1.2 | 0.002 | 0.01 | 0.001 |
| 140 | 01NS01ED0003 | 2.5 | | 2.8 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 141 | 01NS01ED0003 | 2.5 | | 2.8 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 142 | 01NS01ED0003 | 2.5 | | 2.8 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 143 | 01NS01ED0004 | 2.7 | 2.1 | 3.4 | 0.01 | 0.11 | | | 0.01 | 0.001 |
| 144 | 01NS01ED0004 | 2.2 | 2.2 | 2.6 | 0.01 | 0.08 | 0.8 | 0.002 | 0.02 | 0.001 |
| 145 | 01NS01ED0004 | 2.2 | | 4.0 | 0.03 | 0.06 | 1.7 | 0.002 | 0.01 | 0.001 |
| 146 | 01NS01ED0004 | 2.2 | | 2.6 | 0.01 | 0.10 | 1.1 | 0.002 | 0.01 | 0.001 |
| 147 | 01NS01ED0004 | 2.5 | | 3.8 | 0.02 | 0.10 | 1.9 | 0.002 | 0.01 | 0.001 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 29 PB2302P | 30 P13305P | 31 P26304P | 32 P25304P | 33 ORGANIC ANION MEQ/L |
|---|---|---|---|---|---|
| 99 01NS01EA0016 | 0.002 | 0.140 | 0.100 | 0.020 | 0.070737 |
| 100 01NS01EA0016 | 0.002 | 0.036 | 0.160 | 0.040 | 0.055048 |
| 101 01NS01EA0016 | 0.002 | 0.160 | 0.100 | 0.020 | 0.083452 |
| 102 01NS01EA0016 | 0.002 | 0.030 | 0.240 | 0.040 | 0.059467 |
| 103 01NS01EA0016 | 0.002 | 0.030 | 0.270 | 0.040 | 0.055568 |
| 104 01NS01EA0016 | 0.002 | 0.026 | 0.270 | 0.030 | 0.053804 |
| 105 01NS01EA0016 | 0.002 | 0.100 | 0.150 | 0.020 | 0.067907 |
| 106 01NS01EA0016 | 0.002 | 0.021 | 0.240 | 0.035 | 0.051235 |
| 107 01NS01EA0019 | 0.002 | 0.230 | 0.240 | 0.010 | 0.074654 |
| 108 01NS01EA0019 | 0.002 | 0.260 | 0.400 | 0.020 | 0.107355 |
| 109 01NS01EA0019 | 0.002 | 0.170 | 0.140 | 0.020 | 0.068131 |
| 110 01NS01EA0019 | 0.002 | 0.260 | 0.350 | 0.020 | 0.084350 |
| 111 01NS01EA0019 | 0.002 | 0.230 | 0.240 | 0.020 | 0.070267 |
| 112 01NS01EA0019 | 0.002 | 0.220 | 0.350 | 0.021 | 0.084350 |
| 113 01NS01EA0019 | 0.002 | 0.230 | 0.360 | 0.022 | 0.084350 |
| 114 01NS01EA0020 | 0.002 | 0.045 |  | 0.010 | 0.017213 |
| 115 01NS01EA0020 | 0.002 | 0.010 |  | 0.010 | 0.023584 |
| 116 01NS01EA0020 | 0.002 | 0.050 | 0.010 | 0.010 | 0.024322 |
| 117 01NS01EA0020 | 0.002 | 0.010 |  | 0.010 | 0.021267 |
| 118 01NS01EA0020 | 0.002 | 0.050 |  | 0.010 | 0.026930 |
| 119 01NS01EA0020 | 0.002 | 0.020 |  | 0.010 | 0.025006 |
| 120 01NS01EA0020 | 0.002 | 0.020 |  | 0.010 | 0.028854 |
| 121 01NS01ED0001 | 0.003 | 0.100 | 0.050 | 0.020 | 0.030452 |
| 122 01NS01ED0001 | 0.002 | 0.050 |  | 0.020 | 0.023094 |
| 123 01NS01ED0001 | 0.002 | 0.086 | 0.060 | 0.020 | 0.032098 |
| 124 01NS01ED0001 | 0.002 | 0.033 | 0.110 | 0.010 | 0.021383 |
| 125 01NS01ED0001 | 0.002 | 0.090 | 0.070 | 0.030 | 0.035390 |
| 126 01NS01ED0001 | 0.002 | 0.090 | 0.070 | 0.030 | 0.034567 |
| 127 01NS01ED0001 | 0.002 | 0.090 | 0.070 | 0.030 | 0.033744 |
| 128 01NS01ED0001 | 0.002 | 0.038 |  | 0.021 | 0.023094 |
| 129 01NS01ED0002 | 0.003 | 0.210 | 0.170 | 0.010 | 0.066713 |
| 130 01NS01ED0002 | 0.002 | 0.200 | 0.200 | 0.020 | 0.079834 |
| 131 01NS01ED0002 | 0.002 | 0.120 | 0.090 | 0.020 | 0.060158 |
| 132 01NS01ED0002 | 0.002 | 0.280 | 0.380 | 0.020 | 0.112740 |
| 133 01NS01ED0002 | 0.002 | 0.200 | 0.160 | 0.010 | 0.067159 |
| 134 01NS01ED0002 | 0.002 | 0.200 | 0.170 | 0.030 | 0.075697 |
| 135 01NS01ED0003 | 0.002 | 0.150 |  | 0.020 | 0.028120 |
| 136 01NS01ED0003 | 0.002 | 0.046 |  | 0.020 | 0.035829 |
| 137 01NS01ED0003 | 0.002 | 0.080 | 0.030 | 0.020 | 0.031350 |
| 138 01NS01ED0003 | 0.002 | 0.052 | 0.060 | 0.010 | 0.025027 |
| 139 01NS01ED0003 | 0.002 | 0.090 |  | 0.010 | 0.028663 |
| 140 01NS01ED0003 | 0.002 | 0.035 |  | 0.016 | 0.025954 |
| 141 01NS01ED0003 | 0.002 | 0.034 |  | 0.018 | 0.025954 |
| 142 01NS01ED0003 | 0.002 | 0.035 |  | 0.015 | 0.025954 |
| 143 01NS01ED0004 | 0.002 | 0.110 | 0.060 | 0.020 | 0.026742 |
| 144 01NS01ED0004 | 0.002 | 0.055 | 0.060 | 0.030 | 0.021833 |
| 145 01NS01ED0004 | 0.002 | 0.110 | 0.080 | 0.030 | 0.030673 |
| 146 01NS01ED0004 | 0.002 | 0.064 | 0.080 | 0.030 | 0.021399 |
| 147 01NS01ED0004 | 0.002 | 0.120 | 0.080 | 0.030 | 0.030601 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| | 0 NAQUADAT NUMBER | 1 LAKE # | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 148 | 01NS01ED0004 | 21 | 501823 | 23-OCT-85 | 941 | 244 | | | 5.4 | 20.0 | 23 |
| 149 | 01NS01ED0005 | 22 | 300669 | 26-MAY-83 | 1201 | 244 | | | 4.8 | | 28 |
| 150 | 01NS01ED0005 | 22 | 400320 | 03-MAY-84 | 955 | 244 | 9.0 | 4.6 | 4.6 | 36.0 | 30 |
| 151 | 01NS01ED0005 | 22 | 402704 | 17-OCT-84 | 950 | 244 | 11.0 | 4.9 | 5.0 | | 25 |
| 152 | 01NS01ED0005 | 22 | 500572 | 03-JUN-85 | 1005 | 244 | | 4.7 | 4.8 | 34.0 | 30 |
| 153 | 01NS01ED0006 | 23 | 300670 | 26-MAY-83 | 1201 | 244 | | | 5.9 | | 30 |
| 154 | 01NS01ED0006 | 23 | 302275 | 18-OCT-83 | 1050 | 244 | 14.5 | | 5.8 | 28.0 | 30 |
| 155 | 01NS01ED0006 | 23 | 400321 | 03-MAY-84 | 830 | 244 | 10.0 | 5.6 | 5.7 | 30.0 | 29 |
| 156 | 01NS01ED0006 | 23 | 402705 | 17-OCT-84 | 1130 | T244 | 11.0 | 5.7 | 6.2 | | 29 |
| 157 | 01NS01ED0006 | 23 | 402706 | 17-OCT-84 | 1132 | T244 | 11.0 | 5.7 | 6.2 | | 29 |
| 158 | 01NS01ED0006 | 23 | 402707 | 17-OCT-84 | 1134 | T244 | 11.0 | 5.7 | 6.3 | | 29 |
| 159 | 01NS01ED0006 | 23 | 500573 | 03-JUN-85 | 1110 | 244 | | 5.8 | 5.8 | 32.0 | 31 |
| 160 | 01NS01ED0006 | 23 | 501877 | 23-OCT-85 | 1201 | 244 | | | | | |
| 161 | 01NS01ED0006 | 23 | 501825 | 23-OCT-85 | 1004 | 244 | | | 6.1 | 28.0 | 31 |
| 162 | 01NS01ED0007 | 24 | 300671 | 26-MAY-83 | 1201 | 244 | | | 5.0 | | 28 |
| 163 | 01NS01ED0007 | 24 | 302274 | 18-OCT-83 | 1045 | 244 | 13.5 | | 5.3 | 23.0 | 26 |
| 164 | 01NS01ED0007 | 24 | 400322 | 03-MAY-84 | 820 | 244 | 8.5 | 4.8 | 4.8 | 30.0 | 29 |
| 165 | 01NS01ED0007 | 24 | 402708 | 17-OCT-84 | 1120 | 244 | 11.0 | 5.3 | 5.3 | | 27 |
| 166 | 01NS01ED0007 | 24 | 500574 | 03-JUN-85 | 1201 | 244 | | 5.0 | 4.9 | 34.0 | 31 |
| 167 | 01NS01ED0007 | 24 | 501826 | 23-OCT-85 | 1002 | 244 | | | 5.2 | 28.0 | 30 |
| 168 | 01NS01ED0008 | 25 | 300672 | 26-MAY-83 | 1201 | 244 | | | 4.9 | | 25 |
| 169 | 01NS01ED0008 | 25 | 400323 | 03-MAY-84 | 905 | 244 | 10.5 | 4.8 | 4.8 | 27.0 | 25 |
| 170 | 01NS01ED0008 | 25 | 500575 | 03-JUN-85 | 1155 | T244 | | 4.8 | 4.8 | 32.0 | 28 |
| 171 | 01NS01ED0008 | 25 | 500576 | 03-JUN-85 | 1157 | T244 | | | 4.8 | | 28 |
| 172 | 01NS01ED0008 | 25 | 500577 | 03-JUN-85 | 1159 | T244 | | | 4.8 | | 28 |
| 173 | 01NS01ED0008 | 25 | 501827 | 23-OCT-85 | 950 | 244 | | | 5.0 | 22.0 | 28 |
| 174 | 01NS01ED0010 | 26 | 300673 | 26-MAY-83 | 1201 | 244 | | | 4.5 | | 30 |
| 175 | 01NS01ED0010 | 26 | 302285 | 18-OCT-83 | 1140 | 244 | 12.0 | | 4.6 | 28.0 | 29 |
| 176 | 01NS01ED0010 | 26 | 400324 | 03-MAY-84 | 1010 | 244 | 10.8 | 4.4 | 4.4 | 30.0 | 30 |
| 177 | 01NS01ED0010 | 26 | 402712 | 17-OCT-84 | 925 | T244 | 11.0 | 4.5 | 4.6 | | 31 |
| 178 | 01NS01ED0010 | 26 | 402713 | 17-OCT-84 | 927 | T244 | 11.0 | 4.5 | 4.6 | | 31 |
| 179 | 01NS01ED0010 | 26 | 402714 | 17-OCT-84 | 929 | T244 | 11.0 | 4.5 | 4.6 | | 31 |
| 180 | 01NS01ED0010 | 26 | 500578 | 03-JUN-85 | 1000 | 244 | | 4.5 | 4.4 | 38.0 | 35 |
| 181 | 01NS01ED0010 | 26 | 501828 | 23-OCT-85 | 931 | 244 | | | 4.6 | 30.0 | 33 |
| 182 | 01NS01ED0011 | 27 | 300674 | 26-MAY-83 | 1201 | 244 | | | 5.3 | | 22 |
| 183 | 01NS01ED0011 | 27 | 302280 | 18-OCT-83 | 1115 | 244 | 13.0 | | 5.5 | 20.0 | 22 |
| 184 | 01NS01ED0011 | 27 | 400325 | 03-MAY-84 | 925 | 244 | 10.2 | 5.3 | 5.2 | 22.0 | 22 |
| 185 | 01NS01ED0011 | 27 | 402715 | 17-OCT-84 | 1215 | 244 | 11.0 | 5.4 | 5.5 | | 23 |
| 186 | 01NS01ED0011 | 27 | 500579 | 03-JUN-85 | 1145 | 244 | | 5.3 | 5.3 | 26.0 | 23 |
| 187 | 01NS01ED0011 | 27 | 501829 | 23-OCT-85 | 945 | 244 | | | 5.5 | 20.0 | 23 |
| 188 | 01NS01ED0013 | 28 | 300675 | 26-MAY-83 | 1201 | 244 | | | 4.7 | | 27 |
| 189 | 01NS01ED0013 | 28 | 302290 | 18-OCT-83 | 1205 | 244 | 11.5 | | 4.7 | 26.0 | 27 |
| 190 | 01NS01ED0013 | 28 | 400326 | 02-MAY-84 | 1705 | 244 | 12.0 | 4.5 | 4.5 | 32.0 | 28 |
| 191 | 01NS01ED0013 | 28 | 400370 | 02-MAY-84 | 1706 | 244 | 12.0 | 4.5 | 4.7 | 32.0 | 27 |
| 192 | 01NS01ED0013 | 28 | 400371 | 02-MAY-84 | 1707 | 244 | 12.0 | 4.5 | 4.7 | 32.0 | 27 |
| 193 | 01NS01ED0013 | 28 | 500580 | 03-JUN-85 | 1010 | 244 | | 4.6 | 4.6 | 34.0 | 30 |
| 194 | 01NS01ED0013 | 28 | 501876 | 22-OCT-85 | 1201 | 244 | | | | | |
| 195 | 01NS01ED0014 | 29 | 300676 | 26-MAY-83 | 1201 | 244 | | | 4.3 | | 38 |
| 196 | 01NS01ED0014 | 29 | 302288 | 18-OCT-83 | 1155 | 244 | 12.0 | | 4.4 | 36.0 | 37 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 148 01NS01ED0004 | 0.5 | 5 | | -0.1 | 0.40 | 0.36 | 0.16 | 2.6 | 4.1 |
| 149 01NS01ED0005 | | 50 | | -0.8 | 0.40 | | 0.20 | 2.6 | 4.0 |
| 150 01NS01ED0005 | 0.5 | 70 | | -0.8 | 0.36 | 0.40 | 0.20 | 2.6 | 4.2 |
| 151 01NS01ED0005 | 1.0 | 40 | | -0.4 | 0.38 | 0.37 | 0.27 | 2.8 | 4.3 |
| 152 01NS01ED0005 | 0.6 | 40 | | -0.7 | 0.50 | 0.42 | 0.24 | 2.8 | 4.5 |
| 153 01NS01ED0006 | | 30 | | 0.9 | 0.90 | | 0.20 | 3.3 | 5.4 |
| 154 01NS01ED0006 | 0.7 | 15 | | 1.4 | 0.95 | 0.55 | 0.20 | 3.5 | 5.5 |
| 155 01NS01ED0006 | 0.7 | 40 | | 0.9 | 0.83 | 0.46 | 0.20 | 3.2 | 5.3 |
| 156 01NS01ED0006 | 0.7 | 30 | 1.3 | | 0.93 | 0.55 | 0.22 | 3.5 | 5.0 |
| 157 01NS01ED0006 | 0.6 | 30 | 1.4 | | 0.97 | 0.56 | 0.22 | 3.4 | 5.0 |
| 158 01NS01ED0006 | 0.7 | 30 | 1.4 | | 0.97 | 0.55 | 0.22 | 3.5 | 5.0 |
| 159 01NS01ED0006 | 0.5 | 20 | | 1.0 | 0.90 | 0.55 | 0.15 | 3.4 | 5.8 |
| 160 01NS01ED0006 | | | | | | | | | |
| 161 01NS01ED0006 | 0.6 | 10 | 1.3 | | 0.93 | 0.56 | 0.16 | 3.6 | 5.8 |
| 162 01NS01ED0007 | | 80 | | -0.2 | 0.70 | | 0.20 | 2.7 | 4.2 |
| 163 01NS01ED0007 | 1.0 | 75 | | 0.2 | 0.75 | 0.40 | 0.20 | 3.0 | 4.2 |
| 164 01NS01ED0007 | 0.7 | 70 | | -0.2 | 0.65 | 0.45 | 0.20 | 2.9 | 4.4 |
| 165 01NS01ED0007 | 1.1 | 100 | | 0.3 | 0.71 | 0.47 | 0.27 | 3.1 | 4.5 |
| 166 01NS01ED0007 | 0.5 | 60 | | -0.2 | 0.75 | 0.50 | 0.25 | 3.0 | 5.1 |
| 167 01NS01ED0007 | 0.7 | 60 | | 0.2 | 0.72 | 0.48 | 0.24 | 3.3 | 4.9 |
| 168 01NS01ED0008 | | 100 | | -0.2 | 0.45 | | 0.20 | 2.5 | 3.6 |
| 169 01NS01ED0008 | 0.5 | 80 | | -0.2 | 0.47 | 0.32 | 0.20 | 2.6 | 3.8 |
| 170 01NS01ED0008 | 0.4 | 70 | | -0.5 | 0.55 | 0.55 | 0.15 | 2.8 | 4.1 |
| 171 01NS01ED0008 | 0.6 | 80 | | -0.5 | 0.55 | 0.40 | 0.25 | 3.0 | 4.0 |
| 172 01NS01ED0008 | 0.5 | 80 | | -0.4 | 0.55 | 0.40 | 0.25 | 3.0 | 4.1 |
| 173 01NS01ED0008 | 0.4 | 120 | | -0.1 | 0.47 | 0.42 | 0.20 | 3.1 | 4.0 |
| 174 01NS01ED0010 | | 110 | | -1.4 | 0.30 | | 0.20 | 2.4 | 3.5 |
| 175 01NS01ED0010 | 1.0 | 100 | | -1.1 | 0.31 | 0.35 | 0.20 | 2.7 | 3.7 |
| 176 01NS01ED0010 | 0.5 | 100 | | -1.8 | 0.27 | 0.28 | 0.10 | 2.3 | 3.6 |
| 177 01NS01ED0010 | 1.0 | 160 | | -1.3 | 0.40 | 0.38 | 0.27 | 2.8 | 3.9 |
| 178 01NS01ED0010 | 0.8 | 160 | | -1.3 | 0.36 | 0.38 | 0.27 | 2.7 | 3.9 |
| 179 01NS01ED0010 | 0.9 | 160 | | -1.4 | 0.37 | 0.38 | 0.27 | 2.8 | 3.9 |
| 180 01NS01ED0010 | 0.8 | 90 | | -1.9 | 0.32 | 0.40 | 0.20 | 2.7 | 4.3 |
| 181 01NS01ED0010 | 0.7 | 120 | | -1.4 | 0.35 | 0.40 | 0.16 | 2.8 | 4.3 |
| 182 01NS01ED0011 | | 5 | | -0.2 | 0.40 | | 0.20 | 2.3 | 4.1 |
| 183 01NS01ED0011 | 0.3 | 5 | | 0.1 | 0.37 | 0.35 | 0.20 | 2.5 | 4.0 |
| 184 01NS01ED0011 | 0.5 | 10 | | 0.2 | 0.37 | 0.31 | 0.10 | 2.5 | 4.0 |
| 185 01NS01ED0011 | 0.3 | 5 | | | 0.40 | 0.34 | 0.22 | 2.7 | 4.1 |
| 186 01NS01ED0011 | 0.4 | 5 | | | 0.50 | 0.35 | 0.20 | 2.6 | 4.0 |
| 187 01NS01ED0011 | 0.3 | 5 | | -0.1 | 0.40 | 0.36 | 0.16 | 2.6 | 4.1 |
| 188 01NS01ED0013 | | 40 | | -1.0 | 0.20 | | 0.40 | 2.3 | 3.8 |
| 189 01NS01ED0013 | 0.4 | 5 | | -1.2 | 0.19 | 0.30 | 0.10 | 2.5 | 3.7 |
| 190 01NS01ED0013 | 0.7 | 45 | | -1.0 | 0.26 | 0.31 | 0.30 | 2.3 | 3.5 |
| 191 01NS01ED0013 | 0.5 | 50 | | -1.0 | 0.27 | 0.38 | 0.30 | 2.2 | 3.5 |
| 192 01NS01ED0013 | 0.5 | 50 | | -0.9 | 0.25 | 0.30 | 0.30 | 2.2 | 3.5 |
| 193 01NS01ED0013 | 0.6 | 20 | | -1.0 | 0.30 | 0.30 | 0.40 | 2.6 | 4.3 |
| 194 01NS01ED0013 | | | | | | | | | |
| 195 01NS01ED0014 | | 160 | | -2.7 | 0.20 | | 0.20 | 2.3 | 3.4 |
| 196 01NS01ED0014 | 0.8 | 200 | | -2.0 | 0.25 | 0.38 | 0.30 | 3.0 | 3.8 |

### APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P06107L | 23 P07110L | 24 P07601L | 25 P14102L | 26 P29305P | 27 P30304P | 28 P48302P |
|---|---|---|---|---|---|---|---|---|---|
| 148 01NS01ED0004 | 2.3 | | 2.8 | 0.01 | 0.10 | 0.9 | 0.002 | 0.01 | 0.001 |
| 149 01NS01ED0005 | 3.5 | 2.5 | 5.2 | 0.01 | 0.10 | | | 0.01 | 0.001 |
| 150 01NS01ED0005 | 3.2 | 2.6 | 7.2 | 0.03 | 0.08 | 4.3 | 0.002 | 0.01 | 0.001 |
| 151 01NS01ED0005 | 2.7 | 2.2 | 4.0 | 0.01 | 0.10 | 2.5 | 0.002 | 0.01 | 0.001 |
| 152 01NS01ED0005 | 3.2 | 2.6 | 6.7 | 0.05 | 0.10 | 3.6 | 0.002 | 0.01 | 0.001 |
| 153 01NS01ED0006 | 3.0 | 2.1 | 4.4 | 0.01 | 0.16 | | | 0.01 | 0.001 |
| 154 01NS01ED0006 | 2.2 | 2.2 | 9.3 | 0.02 | 0.14 | 0.4 | 0.002 | 0.02 | 0.001 |
| 155 01NS01ED0006 | 2.9 | 2.4 | 4.4 | 0.01 | 0.06 | 2.2 | 0.002 | 0.01 | 0.001 |
| 156 01NS01ED0006 | 3.7 | | 4.9 | 0.01 | 0.13 | 1.8 | 0.002 | 0.01 | 0.001 |
| 157 01NS01ED0006 | 2.2 | | 4.8 | 0.01 | 0.14 | 1.8 | 0.002 | 0.01 | 0.001 |
| 158 01NS01ED0006 | 2.2 | | 4.9 | 0.01 | 0.14 | 1.8 | 0.002 | 0.01 | 0.001 |
| 159 01NS01ED0006 | 2.6 | | 4.8 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 160 01NS01ED0006 | | | | | | | 0.002 | 0.01 | 0.001 |
| 161 01NS01ED0006 | 2.5 | | 4.5 | 0.01 | 0.11 | 0.8 | 0.002 | 0.01 | 0.001 |
| 162 01NS01ED0007 | 4.0 | 2.1 | 7.4 | 0.01 | 0.11 | | | 0.01 | 0.001 |
| 163 01NS01ED0007 | 3.0 | 2.3 | 6.6 | 0.02 | 0.12 | 1.9 | 0.002 | 0.02 | 0.001 |
| 164 01NS01ED0007 | 3.2 | 2.4 | 7.1 | 0.01 | 0.05 | 3.3 | 0.002 | 0.01 | 0.001 |
| 165 01NS01ED0007 | 3.2 | 2.0 | 8.3 | 0.02 | 0.17 | 2.2 | 0.002 | 0.01 | 0.001 |
| 166 01NS01ED0007 | 3.2 | 2.6 | 7.4 | 0.01 | 0.10 | 2.8 | 0.002 | 0.01 | 0.001 |
| 167 01NS01ED0007 | 3.1 | 2.1 | 6.7 | 0.01 | 0.11 | 1.4 | 0.002 | 0.01 | 0.001 |
| 168 01NS01ED0008 | 3.7 | 1.5 | 8.2 | 0.01 | 0.12 | | | 0.01 | 0.001 |
| 169 01NS01ED0008 | 2.9 | 1.6 | 8.3 | 0.01 | 0.06 | 3.3 | 0.002 | 0.01 | 0.001 |
| 170 01NS01ED0008 | 3.0 | 1.9 | 9.4 | 0.01 | 0.10 | 2.0 | 0.002 | 0.01 | 0.001 |
| 171 01NS01ED0008 | 3.2 | 2.0 | 9.6 | 0.01 | 0.10 | 1.8 | 0.002 | 0.01 | 0.001 |
| 172 01NS01ED0008 | 3.2 | 1.9 | 9.6 | 0.01 | 0.10 | 1.8 | 0.002 | 0.01 | 0.001 |
| 173 01NS01ED0008 | 3.5 | 1.8 | 11.0 | 0.01 | 0.11 | 2.5 | 0.002 | 0.01 | 0.001 |
| 174 01NS01ED0010 | 4.0 | 1.7 | 8.5 | 0.01 | 0.11 | | | 0.01 | 0.001 |
| 175 01NS01ED0010 | 4.0 | 2.4 | 10.0 | 0.01 | 0.16 | 2.1 | 0.003 | 0.02 | 0.001 |
| 176 01NS01ED0010 | 3.2 | 1.9 | 10.0 | 0.01 | 0.06 | 2.4 | 0.002 | 0.01 | 0.001 |
| 177 01NS01ED0010 | 4.2 | 2.0 | 14.0 | 0.01 | 0.15 | 1.0 | 0.002 | 0.01 | 0.001 |
| 178 01NS01ED0010 | 4.2 | 2.0 | 14.0 | 0.01 | 0.14 | 1.0 | 0.002 | 0.01 | 0.001 |
| 179 01NS01ED0010 | 4.2 | 2.0 | 15.0 | 0.01 | 0.16 | 1.0 | 0.002 | 0.01 | 0.001 |
| 180 01NS01ED0010 | 3.6 | 2.2 | 9.8 | 0.01 | 0.10 | 0.1 | 0.002 | 0.01 | 0.001 |
| 181 01NS01ED0010 | 4.0 | 2.6 | 9.9 | 0.01 | 0.10 | 1.8 | 0.002 | 0.01 | 0.001 |
| 182 01NS01ED0011 | 2.3 | 1.9 | 2.2 | 0.01 | 0.09 | | | 0.01 | 0.001 |
| 183 01NS01ED0011 | 2.1 | 2.3 | 2.5 | 0.01 | 0.08 | 0.6 | 0.002 | 0.02 | 0.001 |
| 184 01NS01ED0011 | 2.0 | | 2.8 | 0.01 | 0.06 | 1.0 | 0.002 | 0.01 | 0.001 |
| 185 01NS01ED0011 | 2.2 | | 1.2 | 0.02 | 0.11 | 0.6 | 0.002 | 0.01 | 0.001 |
| 186 01NS01ED0011 | 2.0 | | 2.5 | 0.01 | 0.10 | 0.2 | 0.002 | 0.01 | 0.001 |
| 187 01NS01ED0011 | 2.4 | | 2.0 | 0.01 | 0.10 | 0.5 | 0.002 | 0.01 | 0.001 |
| 188 01NS01ED0013 | 3.0 | 2.1 | 5.4 | 0.01 | 0.11 | | | 0.01 | 0.001 |
| 189 01NS01ED0013 | 2.8 | 2.7 | 3.1 | 0.01 | 0.08 | 3.8 | 0.004 | 0.02 | 0.001 |
| 190 01NS01ED0013 | 2.7 | 2.4 | 5.6 | 0.01 | 0.06 | 2.0 | 0.002 | 0.01 | 0.001 |
| 191 01NS01ED0013 | 2.7 | 2.3 | 5.1 | 0.01 | 0.06 | 1.8 | 0.002 | 0.01 | 0.001 |
| 192 01NS01ED0013 | 2.7 | 2.5 | 5.2 | 0.01 | 0.05 | 1.8 | 0.002 | 0.01 | 0.001 |
| 193 01NS01ED0013 | 3.0 | | 5.2 | 0.01 | 0.10 | 0.1 | 0.002 | 0.01 | 0.001 |
| 194 01NS01ED0013 | | | | | | | 0.002 | 0.01 | 0.001 |
| 195 01NS01ED0014 | 5.5 | 1.7 | 13.0 | 0.01 | 0.15 | | | 0.01 | 0.001 |
| 196 01NS01ED0014 | 5.2 | 2.2 | 35.0 | 0.01 | 0.14 | 1.0 | 0.002 | 0.02 | 0.001 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 29 P82302P | 30 P13305P | 31 P26304P | 32 P25304P | 33 ORGANIC ANION MEQ/L |
|---|---|---|---|---|---|
| 148 01NS01ED0004 | 0.002 | 0.066 | 0.084 | 0.028 | 0.023512 |
| 149 01NS01ED0005 | 0.002 | 0.170 | 0.100 | 0.020 | 0.037689 |
| 150 01NS01ED0005 | 0.002 | 0.210 | 0.140 | 0.030 | 0.048956 |
| 151 01NS01ED0005 | 0.002 | 0.180 | 0.120 | 0.020 | 0.030673 |
| 152 01NS01ED0005 | 0.002 | 0.240 | 0.140 | 0.020 | 0.048561 |
| 153 01NS01ED0006 | 0.002 | 0.083 | 0.200 | 0.070 | 0.039912 |
| 154 01NS01ED0006 | 0.002 | 0.032 | 0.210 | 0.060 | 0.083302 |
| 155 01NS01ED0006 | 0.002 | 0.083 | 0.170 | 0.060 | 0.038866 |
| 156 01NS01ED0006 | 0.002 | 0.043 | 0.300 | 0.050 | 0.045837 |
| 157 01NS01ED0006 | 0.002 | 0.045 | 0.300 | 0.050 | 0.044902 |
| 158 01NS01ED0006 | 0.002 | 0.045 | 0.290 | 0.050 | 0.046215 |
| 159 01NS01ED0006 | 0.003 | 0.090 | 0.190 | 0.100 | 0.042994 |
| 160 01NS01ED0006 | 0.002 | 0.010 |  | 0.010 |  |
| 161 01NS01ED0006 | 0.002 | 0.025 | 0.290 | 0.070 | 0.041711 |
| 162 01NS01ED0007 | 0.003 | 0.170 | 0.210 | 0.030 | 0.056745 |
| 163 01NS01ED0007 | 0.002 | 0.160 | 0.250 | 0.030 | 0.054320 |
| 164 01NS01ED0007 | 0.002 | 0.110 | 0.150 | 0.030 | 0.051460 |
| 165 01NS01ED0007 | 0.002 | 0.170 | 0.320 | 0.040 | 0.068311 |
| 166 01NS01ED0007 | 0.002 | 0.120 | 0.190 | 0.030 | 0.055220 |
| 167 01NS01ED0007 | 0.002 | 0.150 | 0.200 | 0.038 | 0.053954 |
| 168 01NS01ED0008 | 0.003 | 0.210 | 0.140 | 0.010 | 0.061189 |
| 169 01NS01ED0008 | 0.002 | 0.160 | 0.100 | 0.020 | 0.060158 |
| 170 01NS01ED0008 | 0.002 | 0.200 | 0.130 | 0.010 | 0.068131 |
| 171 01NS01ED0008 | 0.002 | 0.200 | 0.130 | 0.010 | 0.069580 |
| 172 01NS01ED0008 | 0.002 | 0.250 | 0.130 | 0.010 | 0.069580 |
| 173 01NS01ED0008 | 0.002 | 0.210 | 0.190 | 0.013 | 0.084350 |
| 174 01NS01ED0010 | 0.002 | 0.230 | 0.170 | 0.010 | 0.055822 |
| 175 01NS01ED0010 | 0.002 | 0.200 | 0.160 | 0.010 | 0.067994 |
| 176 01NS01ED0010 | 0.002 | 0.160 | 0.100 | 0.020 | 0.063316 |
| 177 01NS01ED0010 | 0.002 | 0.280 | 0.320 | 0.010 | 0.095192 |
| 178 01NS01ED0010 | 0.002 | 0.320 | 0.300 | 0.010 | 0.095192 |
| 179 01NS01ED0010 | 0.002 | 0.310 | 0.300 | 0.010 | 0.101991 |
| 180 01NS01ED0010 | 0.002 | 0.250 | 0.160 | 0.010 | 0.062050 |
| 181 01NS01ED0010 | 0.002 | 0.210 | 0.190 | 0.014 | 0.067314 |
| 182 01NS01ED0011 | 0.002 | 0.083 |  | 0.020 | 0.018107 |
| 183 01NS01ED0011 | 0.002 | 0.021 |  | 0.020 | 0.021383 |
| 184 01NS01ED0011 | 0.002 | 0.086 | 0.030 | 0.030 | 0.022548 |
| 185 01NS01ED0011 | 0.002 | 0.027 |  | 0.020 | 0.010264 |
| 186 01NS01ED0011 | 0.002 | 0.070 | 0.050 | 0.020 | 0.020576 |
| 187 01NS01ED0011 | 0.002 | 0.020 |  | 0.023 | 0.017107 |
| 188 01NS01ED0013 | 0.002 | 0.180 | 0.120 | 0.010 | 0.037944 |
| 189 01NS01ED0013 | 0.002 | 0.100 | 0.050 | 0.010 | 0.021783 |
| 190 01NS01ED0013 | 0.002 | 0.170 | 0.100 | 0.010 | 0.036777 |
| 191 01NS01ED0013 | 0.002 | 0.160 | 0.010 | 0.010 | 0.035836 |
| 192 01NS01ED0013 | 0.002 | 0.170 | 0.010 | 0.010 | 0.036539 |
| 193 01NS01ED0013 | 0.002 | 0.160 | 0.110 | 0.010 | 0.035357 |
| 194 01NS01ED0013 | 0.002 | 0.010 |  | 0.010 |  |
| 195 01NS01ED0014 | 0.003 | 0.230 | 0.150 | 0.010 | 0.079218 |
| 196 01NS01ED0014 | 0.002 | 0.230 | 0.190 | 0.010 | 0.221607 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 1 LAKE # | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|
| 197 01NS01ED0014 | 29 | 400327 | 02-MAY-84 | 1650 | 244 | 11.5 | 4.2 | 4.1 | 42.0 | 35 |
| 198 01NS01ED0014 | 29 | 402719 | 17-OCT-84 | 915 | 244 | 10.0 | 5.3 | 4.3 | | 42 |
| 199 01NS01ED0014 | 29 | 500581 | 03-JUN-85 | 950 | 244 | | 4.3 | 4.2 | 45.0 | 41 |
| 200 01NS01ED0015 | 30 | 300677 | 26-MAY-83 | 1201 | 244 | | | 5.1 | | 24 |
| 201 01NS01ED0015 | 30 | 302281 | 18-OCT-83 | 1120 | 244 | 12.0 | | 4.9 | 28.0 | 30 |
| 202 01NS01ED0015 | 30 | 400328 | 03-MAY-84 | 935 | 244 | 10.5 | 4.8 | 4.7 | 26.0 | 27 |
| 203 01NS01ED0015 | 30 | 402720 | 17-OCT-84 | 1250 | 244 | 10.0 | 5.0 | 5.0 | | 31 |
| 204 01NS01ED0015 | 30 | 500582 | 03-JUN-85 | 1131 | 244 | | 4.8 | 4.8 | 34.0 | 29 |
| 205 01NS01ED0015 | 30 | 501832 | 23-OCT-85 | 919 | 244 | | | 4.8 | 32.0 | 33 |
| 206 01NS01ED0016 | 31 | 300678 | 26-MAY-83 | 1201 | 244 | | | 4.8 | | 24 |
| 207 01NS01ED0016 | 31 | 302276 | 18-OCT-83 | 1055 | 244 | 11.5 | | 5.0 | 24.0 | 27 |
| 208 01NS01ED0016 | 31 | 400329 | 03-MAY-84 | 900 | 244 | 10.5 | 4.7 | 4.6 | 26.0 | 23 |
| 209 01NS01ED0016 | 31 | 402721 | 17-OCT-84 | 1145 | 244 | 10.0 | 5.0 | 5.0 | | 30 |
| 210 01NS01ED0016 | 31 | 500583 | 03-JUN-85 | 1120 | 244 | | 4.7 | 4.7 | 29.0 | 26 |
| 211 01NS01ED0017 | 32 | 300679 | 26-MAY-83 | 1201 | 244 | | | 5.2 | | 25 |
| 212 01NS01ED0017 | 32 | 302291 | 18-OCT-83 | 1605 | 244 | 13.5 | | 5.5 | 20.0 | 23 |
| 213 01NS01ED0017 | 32 | 400330 | 02-MAY-84 | 1625 | 244 | 11.5 | 4.9 | 4.9 | 48.0 | 26 |
| 214 01NS01ED0017 | 32 | 402722 | 17-OCT-84 | 845 | T244 | 10.0 | 5.4 | 5.5 | | 25 |
| 215 01NS01ED0017 | 32 | 402723 | 17-OCT-84 | 847 | T244 | 10.0 | 5.4 | 5.5 | | 25 |
| 216 01NS01ED0017 | 32 | 402724 | 17-OCT-84 | 849 | T244 | 10.0 | 5.4 | 5.5 | | 25 |
| 217 01NS01ED0017 | 32 | 500584 | 03-JUN-85 | 930 | 244 | | 5.1 | 5.2 | 30.0 | 28 |
| 218 01NS01ED0017 | 32 | 501834 | 22-OCT-85 | 1345 | 244 | | 4.7 | 5.4 | 20.0 | 27 |
| 219 01NS01ED0019 | 33 | 300680 | 26-MAY-83 | 1201 | 244 | | | 4.9 | | 27 |
| 220 01NS01ED0019 | 33 | 302272 | 18-OCT-83 | 1035 | 244 | 13.0 | | 5.2 | 22.0 | 27 |
| 221 01NS01ED0019 | 33 | 400331 | 02-MAY-84 | 1615 | 244 | 10.5 | 4.6 | 4.6 | 44.0 | 27 |
| 222 01NS01ED0019 | 33 | 402725 | 17-OCT-84 | 810 | 244 | 10.0 | 4.8 | 4.9 | | 30 |
| 223 01NS01ED0019 | 33 | 500585 | 03-JUN-85 | 920 | T244 | | 4.8 | 4.8 | 30.0 | 30 |
| 224 01NS01ED0019 | 33 | 500586 | 03-JUN-85 | 922 | T244 | | | 4.8 | | 30 |
| 225 01NS01ED0019 | 33 | 500587 | 03-JUN-85 | 924 | T244 | | | 4.8 | | 30 |
| 226 01NS01ED0019 | 33 | 501835 | 22-OCT-85 | 1352 | 244 | | 4.7 | 5.0 | 21.0 | 30 |
| 227 01NS01ED0020 | 34 | 300681 | 26-MAY-83 | 1201 | 244 | | | 4.8 | | 27 |
| 228 01NS01ED0020 | 34 | 302273 | 18-OCT-83 | 1040 | 244 | 13.0 | | 5.0 | 24.0 | 28 |
| 229 01NS01ED0020 | 34 | 400332 | 02-MAY-84 | 1550 | 244 | 12.0 | 4.6 | 4.6 | 46.0 | 27 |
| 230 01NS01ED0020 | 34 | 402726 | 17-OCT-84 | 832 | 244 | 10.0 | 4.9 | 4.9 | | 31 |
| 231 01NS01ED0020 | 34 | 500588 | 03-JUN-85 | 925 | 244 | | 4.7 | 4.7 | | 30 |
| 232 01NS01ED0020 | 34 | 501836 | 22-OCT-85 | 1335 | 244 | | 4.6 | 5.0 | 26.0 | 31 |
| 233 01NS01ED0021 | 35 | 300682 | 26-MAY-83 | 1201 | 244 | | | 4.4 | | 34 |
| 234 01NS01ED0021 | 35 | 302287 | 18-OCT-83 | 1150 | 244 | 11.0 | | 4.4 | 33.0 | 41 |
| 235 01NS01ED0021 | 35 | 400334 | 02-MAY-84 | 1641 | 244 | 12.0 | 4.3 | 4.2 | 48.0 | 32 |
| 236 01NS01ED0021 | 35 | 400335 | 02-MAY-84 | 1642 | 244 | 12.0 | 4.3 | 4.2 | 48.0 | 31 |
| 237 01NS01ED0021 | 35 | 400333 | 02-MAY-84 | 1640 | 244 | 12.0 | 4.3 | 4.2 | 48.0 | 31 |
| 238 01NS01ED0021 | 35 | 402727 | 17-OCT-84 | 905 | 244 | 9.0 | 4.4 | 4.5 | | 37 |
| 239 01NS01ED0021 | 35 | 500589 | 03-JUN-85 | 945 | 244 | | 4.4 | 4.4 | 40.0 | 38 |
| 240 01NS01ED0021 | 35 | 501837 | 22-OCT-85 | 1352 | 244 | | 4.2 | 4.5 | 30.0 | 36 |
| 241 01NS01ED0022 | 36 | 300683 | 26-MAY-83 | 1201 | 244 | | | 4.7 | | 29 |
| 242 01NS01ED0022 | 36 | 302292 | 18-OCT-83 | 1610 | 244 | | | 5.0 | | 26 |
| 243 01NS01ED0022 | 36 | 400336 | 02-MAY-84 | 1630 | 244 | 10.5 | 4.3 | 4.5 | 32.0 | 30 |
| 244 01NS01ED0022 | 36 | 402728 | 17-OCT-84 | 850 | 244 | 10.5 | 4.9 | 4.9 | | 27 |
| 245 01NS01ED0022 | 36 | 500590 | 03-JUN-85 | 940 | 244 | | 4.7 | 4.7 | 34.0 | 32 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 197 01NS01ED0014 | 0.5 | 120 | | -2.5 | 0.21 | 0.26 | 0.20 | 2.3 | 3.1 |
| 198 01NS01ED0014 | 0.7 | 240 | | -2.7 | 0.42 | 0.48 | 0.35 | 3.1 | 4.8 |
| 199 01NS01ED0014 | 0.6 | 120 | | -3.0 | 0.30 | 0.35 | 0.30 | 2.7 | 3.8 |
| 200 01NS01ED0015 | | 10 | | -0.3 | 0.20 | | 0.20 | 2.3 | 4.0 |
| 201 01NS01ED0015 | 0.8 | 100 | | -0.1 | 0.75 | 0.55 | 0.20 | 3.0 | 4.4 |
| 202 01NS01ED0015 | 0.6 | 70 | | -0.4 | 0.61 | 0.36 | 0.10 | 2.6 | 3.7 |
| 203 01NS01ED0015 | 0.8 | 80 | | 0.1 | 0.79 | 0.54 | 0.22 | 3.2 | 4.8 |
| 204 01NS01ED0015 | 0.7 | 70 | | -0.5 | 0.65 | 0.50 | 0.19 | 2.5 | 3.9 |
| 205 01NS01ED0015 | 0.6 | 70 | | -0.4 | 0.84 | 0.60 | 0.20 | 3.2 | 4.7 |
| 206 01NS01ED0016 | | 140 | | -0.6 | 0.50 | | 0.10 | 2.2 | 3.2 |
| 207 01NS01ED0016 | 0.9 | 120 | | 0.2 | 0.81 | 0.50 | 0.10 | 2.7 | 3.9 |
| 208 01NS01ED0016 | 0.5 | 80 | | -0.4 | 0.46 | 0.28 | 0.10 | 2.3 | 3.1 |
| 209 01NS01ED0016 | 1.0 | 160 | | 0.3 | 1.00 | 0.61 | 0.10 | 2.8 | 4.8 |
| 210 01NS01ED0016 | 0.7 | 120 | | -0.6 | 0.65 | 0.30 | 0.10 | 2.5 | 3.4 |
| 211 01NS01ED0017 | | 40 | | -0.2 | 0.40 | | 0.20 | 2.6 | 4.1 |
| 212 01NS01ED0017 | 0.7 | 10 | | 0.1 | 0.37 | 0.35 | 0.20 | 2.9 | 4.1 |
| 213 01NS01ED0017 | 0.7 | 40 | | 0.1 | 0.46 | 0.37 | 0.20 | 2.8 | 4.4 |
| 214 01NS01ED0017 | 0.8 | 10 | | | 0.45 | 0.41 | 0.25 | 3.0 | 4.6 |
| 215 01NS01ED0017 | 0.8 | 10 | | | 0.45 | 0.42 | 0.27 | 2.9 | 4.4 |
| 216 01NS01ED0017 | 0.8 | 10 | | -0.2 | 0.44 | 0.42 | 0.25 | 2.9 | 4.6 |
| 217 01NS01ED0017 | 0.6 | 15 | | -0.1 | 0.50 | 0.50 | 0.26 | 3.1 | 4.7 |
| 218 01NS01ED0017 | 0.5 | 5 | | 0.2 | 0.42 | 0.44 | 0.24 | 3.1 | 5.0 |
| 219 01NS01ED0019 | | 100 | | -0.4 | 0.50 | | 0.20 | 2.5 | 3.9 |
| 220 01NS01ED0019 | 0.9 | 100 | | 0.2 | 0.64 | 0.45 | 0.20 | 3.1 | 4.0 |
| 221 01NS01ED0019 | 0.5 | 80 | | -0.4 | 0.53 | 0.44 | 0.20 | 2.6 | 3.8 |
| 222 01NS01ED0019 | 1.8 | 140 | | | 0.76 | 0.51 | 0.25 | 3.3 | 4.6 |
| 223 01NS01ED0019 | 0.6 | 80 | | -0.5 | 0.55 | 0.40 | 0.40 | 2.3 | 4.2 |
| 224 01NS01ED0019 | 0.6 | 80 | | -0.6 | 0.60 | 0.40 | 0.30 | 3.1 | 4.2 |
| 225 01NS01ED0019 | 0.6 | 80 | | -0.6 | 0.60 | 0.40 | 0.26 | 3.1 | 4.2 |
| 226 01NS01ED0019 | 0.9 | 140 | | | 0.65 | 0.47 | 0.20 | 3.4 | 4.8 |
| 227 01NS01ED0020 | | 110 | | -0.8 | 0.50 | | 0.20 | 2.5 | 3.5 |
| 228 01NS01ED0020 | 1.1 | 100 | | -0.1 | 0.64 | 0.45 | 0.20 | 3.1 | 4.0 |
| 229 01NS01ED0020 | 0.6 | 100 | | -0.8 | 0.48 | 0.35 | 0.20 | 2.6 | 3.6 |
| 230 01NS01ED0020 | 1.8 | 140 | | | 0.76 | 0.47 | 0.25 | 3.2 | 4.5 |
| 231 01NS01ED0020 | 0.8 | 100 | | -0.9 | 0.55 | 0.40 | 0.26 | 3.0 | 4.0 |
| 232 01NS01ED0020 | 1.2 | 120 | | -0.1 | 0.68 | 0.46 | 0.20 | 3.3 | 4.6 |
| 233 01NS01ED0021 | | 180 | | -2.1 | 0.30 | | 0.20 | 2.4 | 3.3 |
| 234 01NS01ED0021 | 0.7 | 120 | | -2.2 | 0.37 | 0.40 | 0.30 | 3.1 | 3.8 |
| 235 01NS01ED0021 | 0.9 | 120 | | -2.0 | 0.27 | 0.32 | 0.20 | 2.4 | 3.0 |
| 236 01NS01ED0021 | 0.9 | 120 | | -2.1 | 0.26 | 0.28 | 0.20 | 2.4 | 3.0 |
| 237 01NS01ED0021 | 0.9 | 120 | | -2.0 | 0.27 | 0.29 | 0.20 | 2.4 | 3.0 |
| 238 01NS01ED0021 | 1.7 | 160 | | -1.6 | 0.52 | 0.49 | 0.38 | 3.2 | 4.8 |
| 239 01NS01ED0021 | 0.6 | 110 | | -2.4 | 0.30 | 0.30 | 0.26 | 3.0 | 3.7 |
| 240 01NS01ED0021 | 0.6 | 200 | | -1.8 | 0.41 | 0.46 | 0.24 | 3.2 | 4.4 |
| 241 01NS01ED0022 | | 70 | | -0.9 | 0.40 | | 0.20 | 2.6 | 3.9 |
| 242 01NS01ED0022 | 0.7 | 30 | | -0.3 | 0.31 | 0.35 | 0.20 | 3.0 | 4.1 |
| 243 01NS01ED0022 | 0.6 | 60 | | -1.0 | 0.38 | 0.38 | 0.20 | 2.8 | 4.0 |
| 244 01NS01ED0022 | 0.8 | 65 | | -0.4 | 0.38 | 0.38 | 0.27 | 2.8 | 4.4 |
| 245 01NS01ED0022 | 0.7 | 50 | | -0.8 | 0.40 | 0.35 | 0.32 | 3.1 | 4.5 |

### APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P06107L | 23 P07110L | 24 P07601L | 25 P14102L | 26 P29305P | 27 P30304P | 28 P48302P |
|---|---|---|---|---|---|---|---|---|---|
| 197 01NS01ED0014 | 3.8 | 2.1 | 13.0 | 0.01 | 0.05 | 1.9 | 0.002 | 0.01 | 0.001 |
| 198 01NS01ED0014 | 5.7 | 2.0 | 21.0 | 0.01 | 0.17 | 1.4 | 0.002 | 0.01 | 0.001 |
| 199 01NS01ED0014 | 5.0 | 2.4 | 14.0 | 0.01 | 0.10 | 0.4 | 0.002 | 0.01 | 0.001 |
| 200 01NS01ED0015 | 2.7 | 2.1 | 2.0 | 0.01 | 0.08 | | | 0.01 | 0.001 |
| 201 01NS01ED0015 | 3.8 | 2.5 | 11.7 | 0.02 | 0.16 | 3.0 | 0.002 | 0.02 | 0.001 |
| 202 01NS01ED0015 | 3.2 | 2.6 | 6.2 | 0.01 | 0.07 | 1.7 | 0.002 | 0.01 | 0.001 |
| 203 01NS01ED0015 | 3.8 | 2.6 | 8.6 | 0.01 | 0.15 | 2.0 | 0.002 | 0.01 | 0.001 |
| 204 01NS01ED0015 | 3.6 | 2.7 | 7.8 | 0.01 | 0.10 | 0.7 | 0.002 | 0.01 | 0.001 |
| 205 01NS01ED0015 | 4.0 | 2.5 | 9.7 | 0.01 | 0.10 | 3.1 | 0.002 | 0.01 | 0.001 |
| 206 01NS01ED0016 | 3.8 | 0.5 | 12.0 | 0.01 | 0.14 | | | 0.01 | 0.001 |
| 207 01NS01ED0016 | 3.1 | 1.2 | 12.9 | 0.02 | 0.21 | 1.2 | 0.002 | 0.01 | 0.001 |
| 208 01NS01ED0016 | 2.7 | 1.0 | 9.5 | 0.01 | 0.08 | 1.4 | 0.002 | 0.01 | 0.001 |
| 209 01NS01ED0016 | 3.5 | 1.0 | 17.0 | 0.01 | 0.19 | 2.9 | 0.002 | 0.01 | 0.001 |
| 210 01NS01ED0016 | 3.2 | 1.0 | 13.0 | 0.01 | 0.10 | 0.5 | 0.002 | 0.01 | 0.001 |
| 211 01NS01ED0017 | 2.7 | 1.9 | 4.2 | 0.01 | 0.09 | | | 0.01 | 0.001 |
| 212 01NS01ED0017 | 2.5 | 2.3 | 3.5 | 0.01 | 0.08 | 0.5 | 0.002 | 0.02 | 0.001 |
| 213 01NS01ED0017 | 2.5 | 2.1 | 5.3 | 0.01 | 0.06 | 2.7 | 0.002 | 0.01 | 0.001 |
| 214 01NS01ED0017 | 2.5 | | 3.7 | 0.01 | 0.11 | 0.7 | 0.002 | 0.01 | 0.001 |
| 215 01NS01ED0017 | 2.5 | | 3.5 | 0.02 | 0.14 | 0.7 | 0.002 | 0.01 | 0.001 |
| 216 01NS01ED0017 | 2.6 | | 3.8 | 0.02 | 0.18 | 0.7 | 0.002 | 0.01 | 0.001 |
| 217 01NS01ED0017 | 2.6 | | 5.0 | 0.01 | 0.10 | 1.2 | 0.002 | 0.01 | 0.001 |
| 218 01NS01ED0017 | 2.6 | | 2.9 | 0.01 | 0.10 | 0.4 | 0.002 | 0.01 | 0.001 |
| 219 01NS01ED0019 | 3.8 | 1.7 | 9.1 | 0.01 | 0.10 | | | 0.01 | 0.002 |
| 220 01NS01ED0019 | 3.3 | 2.2 | 9.9 | 0.01 | 0.15 | 1.7 | 0.002 | 0.02 | 0.001 |
| 221 01NS01ED0019 | 3.2 | 1.9 | 8.7 | 0.01 | 0.06 | 2.9 | 0.002 | 0.01 | 0.001 |
| 222 01NS01ED0019 | 4.0 | 2.0 | 15.0 | 0.01 | 0.14 | 2.6 | 0.002 | 0.01 | 0.001 |
| 223 01NS01ED0019 | 3.6 | 2.2 | 9.4 | 0.01 | 0.10 | 1.8 | 0.002 | 0.01 | 0.002 |
| 224 01NS01ED0019 | 3.6 | 2.2 | 9.3 | 0.01 | 0.10 | 1.8 | 0.002 | 0.01 | 0.001 |
| 225 01NS01ED0019 | 3.4 | 2.2 | 9.3 | 0.01 | 0.11 | 1.8 | 0.002 | 0.01 | 0.001 |
| 226 01NS01ED0019 | 3.9 | 2.1 | 11.0 | 0.01 | 0.13 | 1.6 | 0.002 | 0.01 | 0.001 |
| 227 01NS01ED0020 | 4.0 | 1.7 | 9.3 | 0.01 | 0.11 | | | 0.01 | 0.001 |
| 228 01NS01ED0020 | 3.5 | 2.3 | 10.9 | 0.03 | 0.18 | 1.9 | 0.002 | 0.02 | 0.001 |
| 229 01NS01ED0020 | 3.2 | 1.9 | 9.0 | 0.01 | 0.07 | 2.9 | 0.002 | 0.01 | 0.001 |
| 230 01NS01ED0020 | 4.0 | 2.0 | 15.0 | 0.01 | 0.11 | 2.4 | 0.002 | 0.01 | 0.001 |
| 231 01NS01ED0020 | 3.6 | 2.2 | 10.0 | 0.01 | 0.11 | 1.7 | 0.002 | 0.01 | 0.001 |
| 232 01NS01ED0020 | 3.9 | 2.2 | 10.0 | 0.01 | 0.12 | 1.4 | 0.002 | 0.01 | 0.001 |
| 233 01NS01ED0021 | 5.1 | 1.7 | 15.0 | 0.01 | 0.15 | | | 0.01 | 0.001 |
| 234 01NS01ED0021 | 5.2 | 2.1 | | 0.10 | 0.28 | 4.9 | 0.002 | 0.02 | 0.001 |
| 235 01NS01ED0021 | 3.8 | 2.1 | 14.0 | 0.01 | 0.09 | 2.1 | 0.002 | 0.01 | 0.001 |
| 236 01NS01ED0021 | 3.8 | 2.3 | 13.0 | 0.01 | 0.08 | 1.9 | 0.002 | 0.01 | 0.001 |
| 237 01NS01ED0021 | 3.8 | 2.1 | 14.0 | 0.01 | 0.05 | 2.1 | 0.002 | 0.01 | 0.001 |
| 238 01NS01ED0021 | 5.0 | 2.0 | 21.0 | 0.01 | 0.11 | 6.5 | 0.002 | 0.01 | 0.001 |
| 239 01NS01ED0021 | 4.2 | 2.2 | 13.0 | 0.01 | 0.10 | 1.2 | 0.002 | 0.01 | 0.001 |
| 240 01NS01ED0021 | 4.8 | 2.0 | 22.0 | 0.01 | 0.12 | 5.0 | 0.002 | 0.01 | 0.001 |
| 241 01NS01ED0022 | 3.2 | 2.3 | 7.5 | 0.01 | 0.10 | | | 0.01 | 0.001 |
| 242 01NS01ED0022 | 3.0 | 2.5 | 5.8 | 0.01 | 0.09 | 2.2 | 0.002 | 0.01 | 0.001 |
| 243 01NS01ED0022 | 3.0 | 2.5 | 7.5 | 0.01 | 0.06 | 3.3 | 0.002 | 0.01 | 0.001 |
| 244 01NS01ED0022 | 3.0 | 2.3 | 7.7 | 0.01 | 0.10 | 2.1 | 0.002 | 0.01 | 0.001 |
| 245 01NS01ED0022 | 3.1 | 2.6 | 7.0 | 0.01 | 0.10 | 1.4 | 0.002 | 0.01 | 0.001 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | | 29 PB2302P | 30 P13305P | 31 P26304P | 32 P25304P | 33 ORGANIC ANION MEQ/L |
|---|---|---|---|---|---|---|
| 197 | 01NS01ED0014 | 0.002 | 0.150 | 0.100 | 0.010 | 0.073010 |
| 198 | 01NS01ED0014 | 0.002 | 0.290 | 0.310 | 0.010 | 0.127967 |
| 199 | 01NS01ED0014 | 0.002 | 0.200 | 0.140 | 0.010 | 0.081967 |
| 200 | 01NS01ED0015 | 0.002 | 0.063 | 0.120 | 0.010 | 0.015731 |
| 201 | 01NS01ED0015 | 0.002 | 0.082 | 0.370 | 0.040 | 0.087307 |
| 202 | 01NS01ED0015 | 0.002 | 0.085 | 0.130 | 0.020 | 0.043565 |
| 203 | 01NS01ED0015 | 0.002 | 0.075 | 0.250 | 0.040 | 0.065946 |
| 204 | 01NS01ED0015 | 0.002 | 0.100 | 0.240 | 0.020 | 0.056534 |
| 205 | 01NS01ED0015 | 0.002 | 0.072 | 0.310 | 0.041 | 0.070305 |
| 206 | 01NS01ED0016 | 0.002 | 0.110 | 0.310 | 0.040 | 0.086975 |
| 207 | 01NS01ED0016 | 0.002 | 0.110 | 0.320 | 0.060 | 0.098920 |
| 208 | 01NS01ED0016 | 0.002 | 0.058 | 0.160 | 0.040 | 0.064594 |
| 209 | 01NS01ED0016 | 0.002 | 0.110 | 0.390 | 0.070 | 0.130359 |
| 210 | 01NS01ED0016 | 0.002 | 0.100 | 0.290 | 0.050 | 0.091347 |
| 211 | 01NS01ED0017 | 0.002 | 0.170 | 0.100 | 0.020 | 0.033822 |
| 212 | 01NS01ED0017 | 0.002 | 0.082 | 0.080 | 0.010 | 0.029936 |
| 213 | 01NS01ED0017 | 0.002 | 0.180 | 0.110 | 0.020 | 0.039549 |
| 214 | 01NS01ED0017 | 0.002 | 0.100 | 0.100 | 0.010 | 0.031647 |
| 215 | 01NS01ED0017 | 0.002 | 0.100 | 0.100 | 0.020 | 0.029936 |
| 216 | 01NS01ED0017 | 0.002 | 0.100 | 0.100 | 0.010 | 0.032502 |
| 217 | 01NS01ED0017 | 0.002 | 0.180 | 0.080 | 0.020 | 0.040264 |
| 218 | 01NS01ED0017 | 0.002 | 0.077 | 0.088 | 0.013 | 0.024352 |
| 219 | 01NS01ED0019 | 0.002 | 0.210 | 0.160 | 0.010 | 0.067905 |
| 220 | 01NS01ED0019 | 0.002 | 0.200 | 0.210 | 0.020 | 0.079724 |
| 221 | 01NS01ED0019 | 0.002 | 0.170 | 0.110 | 0.020 | 0.059155 |
| 222 | 01NS01ED0019 | 0.002 | 0.270 | 0.300 | 0.020 | 0.111932 |
| 223 | 01NS01ED0019 | 0.002 | 0.190 | 0.160 | 0.010 | 0.068131 |
| 224 | 01NS01ED0019 | 0.002 | 0.210 | 0.160 | 0.010 | 0.067406 |
| 225 | 01NS01ED0019 | 0.002 | 0.200 | 0.140 | 0.010 | 0.067406 |
| 226 | 01NS01ED0019 | 0.002 | 0.300 | 0.240 | 0.019 | 0.084350 |
| 227 | 01NS01ED0020 | 0.002 | 0.200 | 0.180 | 0.010 | 0.067406 |
| 228 | 01NS01ED0020 | 0.002 | 0.190 | 0.220 | 0.020 | 0.083583 |
| 229 | 01NS01ED0020 | 0.002 | 0.160 | 0.120 | 0.020 | 0.061195 |
| 230 | 01NS01ED0020 | 0.002 | 0.280 | 0.300 | 0.020 | 0.111932 |
| 231 | 01NS01ED0020 | 0.002 | 0.200 | 0.170 | 0.010 | 0.070267 |
| 232 | 01NS01ED0020 | 0.002 | 0.200 | 0.240 | 0.020 | 0.076682 |
| 233 | 01NS01ED0021 | 0.002 | 0.300 | 0.160 | 0.010 | 0.094974 |
| 234 | 01NS01ED0021 | 0.002 | 0.250 | 0.190 | 0.010 | |
| 235 | 01NS01ED0021 | 0.002 | 0.210 | 0.090 | 0.010 | 0.081967 |
| 236 | 01NS01ED0021 | 0.002 | 0.200 | 0.070 | 0.010 | 0.076112 |
| 237 | 01NS01ED0021 | 0.002 | 0.200 | 0.090 | 0.010 | 0.081967 |
| 238 | 01NS01ED0021 | 0.002 | 0.310 | 0.270 | 0.010 | 0.137913 |
| 239 | 01NS01ED0021 | 0.002 | 0.280 | 0.140 | 0.010 | 0.082311 |
| 240 | 01NS01ED0021 | 0.002 | 0.250 | 0.190 | 0.010 | 0.144480 |
| 241 | 01NS01ED0022 | 0.002 | 0.240 | 0.140 | 0.010 | 0.052700 |
| 242 | 01NS01ED0022 | 0.002 | 0.150 | 0.130 | 0.010 | 0.044476 |
| 243 | 01NS01ED0022 | 0.003 | 0.210 | 0.110 | 0.010 | 0.049255 |
| 244 | 01NS01ED0022 | 0.002 | 0.220 | 0.190 | 0.020 | 0.057458 |
| 245 | 01NS01ED0022 | 0.002 | 0.280 | 0.140 | 0.010 | 0.049187 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| | 0 NAQUADAT NUMBER | 1 LAKE # | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 246 | 01NS01ED0022 | 36 | 501838 | 22-OCT-85 | 1350 | 244 | | 4.3 | 4.9 | 22.0 | 29 |
| 247 | 01NS01ED0025 | 37 | 300684 | 26-MAY-83 | 1201 | 244 | | | 4.7 | | 29 |
| 248 | 01NS01ED0025 | 37 | 302289 | 18-OCT-83 | 1201 | 244 | 13.0 | | 5.0 | 23.0 | 25 |
| 249 | 01NS01ED0025 | 37 | 400337 | 02-MAY-84 | 1655 | 244 | 11.5 | 4.4 | 4.4 | 36.0 | 30 |
| 250 | 01NS01ED0025 | 37 | 500591 | 03-JUN-85 | 1015 | 244 | | 4.6 | 4.6 | 36.0 | 32 |
| 251 | 01NS01ED0025 | 37 | 501839 | 22-OCT-85 | 1400 | T244 | | 4.5 | 4.9 | 21.0 | 29 |
| 252 | 01NS01ED0025 | 37 | 501840 | 22-OCT-85 | 1401 | T244 | | | 4.9 | | 29 |
| 253 | 01NS01ED0027 | 38 | 300685 | 26-MAY-83 | 1201 | 244 | | | 5.4 | | 23 |
| 254 | 01NS01ED0027 | 38 | 302284 | 18-OCT-83 | 1135 | 244 | 13.5 | | 5.5 | 20.0 | 23 |
| 255 | 01NS01ED0027 | 38 | 400338 | 03-MAY-84 | 1005 | 244 | 10.5 | 5.5 | 5.3 | 18.0 | 22 |
| 256 | 01NS01ED0027 | 38 | 402732 | 17-OCT-84 | 930 | 244 | 11.0 | 5.4 | 5.7 | | 22 |
| 257 | 01NS01ED0027 | 38 | 500593 | 03-JUN-85 | 1004 | 244 | | | 5.4 | | 23 |
| 258 | 01NS01ED0027 | 38 | 500592 | 03-JUN-85 | 1002 | T244 | | 5.5 | 5.4 | 26.0 | 23 |
| 259 | 01NS01ED0027 | 38 | 500594 | 03-JUN-85 | 1006 | T244 | | | 5.4 | | 23 |
| 260 | 01NS01ED0027 | 38 | 501842 | 23-OCT-85 | 928 | 244 | | | 5.6 | 21.0 | 23 |
| 261 | 01NS01ED0028 | 39 | 300686 | 26-MAY-83 | 1201 | 244 | | | 6.0 | | 25 |
| 262 | 01NS01ED0028 | 39 | 302294 | 18-OCT-83 | 1620 | 244 | 13.0 | | 5.9 | 24.0 | 27 |
| 263 | 01NS01ED0028 | 39 | 400339 | 03-MAY-84 | 840 | 244 | 10.0 | 5.7 | 5.8 | 24.0 | 24 |
| 264 | 01NS01ED0028 | 39 | 402733 | 17-OCT-84 | 1140 | 244 | 10.5 | 5.9 | 6.4 | | 28 |
| 265 | 01NS01ED0028 | 39 | 500595 | 03-JUN-85 | 1115 | 244 | | 5.9 | 5.9 | 30.0 | 26 |
| 266 | 01NS01ED0029 | 40 | 300687 | 26-MAY-83 | 1201 | 244 | | | 4.6 | | 29 |
| 267 | 01NS01ED0029 | 40 | 302286 | 18-OCT-83 | 1145 | 244 | 13.5 | | 4.6 | 24.0 | 33 |
| 268 | 01NS01ED0029 | 40 | 400340 | 03-MAY-84 | 1015 | 244 | 9.5 | 4.5 | 4.4 | 30.0 | 30 |
| 269 | 01NS01ED0029 | 40 | 402734 | 17-OCT-84 | 920 | 244 | 11.0 | 4.7 | 4.8 | | 28 |
| 270 | 01NS01ED0029 | 40 | 500596 | 03-JUN-85 | 952 | 244 | | 4.6 | 4.6 | 38.0 | 33 |
| 271 | 01NS01ED0030 | 41 | 300688 | 26-MAY-83 | 1201 | 244 | | | 5.8 | | 23 |
| 272 | 01NS01ED0030 | 41 | 302282 | 18-OCT-83 | 1125 | 244 | 13.5 | | 5.7 | 20.0 | 23 |
| 273 | 01NS01ED0030 | 41 | 400341 | 03-MAY-84 | 940 | 244 | 10.0 | 5.8 | 5.7 | 20.0 | 22 |
| 274 | 01NS01ED0030 | 41 | 402735 | 17-OCT-84 | 1240 | 244 | 11.0 | 5.7 | 6.1 | | 24 |
| 275 | 01NS01ED0030 | 41 | 500597 | 03-JUN-85 | 1135 | 244 | | 5.8 | 5.8 | 28.0 | 24 |
| 276 | 01NS01ED0030 | 41 | 501847 | 23-OCT-85 | 922 | 244 | | | 6.0 | 22.0 | 25 |
| 277 | 01NS01ED0043 | 42 | 300689 | 26-MAY-83 | 1201 | 244 | | | 4.6 | | 27 |
| 278 | 01NS01ED0043 | 42 | 302293 | 18-OCT-83 | 1615 | 244 | 13.0 | | 4.8 | 22.0 | 25 |
| 279 | 01NS01ED0043 | 42 | 400342 | 02-MAY-84 | 1715 | 244 | 9.8 | 4.4 | 4.5 | 28.0 | 27 |
| 280 | 01NS01ED0043 | 42 | 402736 | 17-OCT-84 | 1310 | T244 | 11.0 | 4.7 | | | |
| 281 | 01NS01ED0043 | 42 | 402737 | 17-OCT-84 | 1312 | T244 | 11.0 | 4.7 | | | |
| 282 | 01NS01ED0043 | 42 | 402738 | 17-OCT-84 | 1314 | T244 | 11.0 | 4.7 | | | |
| 283 | 01NS01ED0043 | 42 | 500598 | 03-JUN-85 | 1020 | 244 | | 4.6 | 4.6 | 32.0 | 29 |
| 284 | 01NS01ED0043 | 42 | 501848 | 22-OCT-85 | 1405 | T244 | | 4.2 | 4.8 | 19.0 | 27 |
| 285 | 01NS01ED0043 | 42 | 501849 | 22-OCT-85 | 1406 | T244 | | | 4.8 | | 26 |
| 286 | 01NS01ED0043 | 42 | 501850 | 22-OCT-85 | 1407 | T244 | | | 4.8 | | 26 |
| 287 | 01NS01ED0047 | 43 | 300690 | 26-MAY-83 | 1201 | 244 | | | 4.9 | | 28 |
| 288 | 01NS01ED0047 | 43 | 302258 | 16-OCT-83 | 1201 | 244 | | | | | |
| 289 | 01NS01ED0047 | 43 | 302259 | 16-OCT-83 | 1211 | 244 | | | | | |
| 290 | 01NS01ED0047 | 43 | 302260 | 16-OCT-83 | 1221 | 244 | | | | | |
| 291 | 01NS01ED0047 | 43 | 302277 | 18-OCT-83 | 1100 | 244 | 13.5 | | 5.4 | 22.0 | 26 |
| 292 | 01NS01ED0047 | 43 | 400343 | 03-MAY-84 | 835 | 244 | 9.0 | 4.8 | 4.6 | 32.0 | 29 |
| 293 | 01NS01ED0047 | 43 | 402739 | 17-OCT-84 | 1150 | 244 | 11.0 | 5.3 | 5.3 | | 27 |
| 294 | 01NS01ED0047 | 43 | 500599 | 03-JUN-85 | 1125 | 244 | | 4.9 | 4.9 | 36.0 | 32 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 246 01NS01ED0022 | 0.6 | 40 | | -0.5 | 0.41 | 0.42 | 0.27 | 3.1 | 4.8 |
| 247 01NS01ED0025 | | 100 | | -1.1 | 0.30 | | 0.20 | 2.5 | 3.8 |
| 248 01NS01ED0025 | 0.7 | 25 | | -0.4 | 0.25 | 0.35 | 0.20 | 2.8 | 4.0 |
| 249 01NS01ED0025 | 0.6 | 80 | | -1.2 | 0.29 | 0.36 | 0.20 | 2.5 | 3.6 |
| 250 01NS01ED0025 | 0.7 | 60 | | -1.0 | 0.40 | 0.35 | 0.40 | 3.1 | 4.1 |
| 251 01NS01ED0025 | 0.5 | 30 | | -0.4 | 0.35 | 0.39 | 0.27 | 3.0 | 4.3 |
| 252 01NS01ED0025 | 0.5 | 30 | | -0.4 | 0.35 | 0.38 | 0.27 | 3.0 | 4.3 |
| 253 01NS01ED0027 | | 5 | | -0.1 | 0.35 | | 0.20 | 2.5 | 4.1 |
| 254 01NS01ED0027 | 0.3 | 5 | | 0.2 | 0.37 | 0.35 | 0.20 | 2.7 | 4.5 |
| 255 01NS01ED0027 | 0.4 | 5 | | 0.4 | 0.35 | 0.34 | 0.20 | 2.6 | 4.0 |
| 256 01NS01ED0027 | 0.3 | 5 | | 0.1 | 0.34 | 0.33 | 0.25 | 2.5 | 4.2 |
| 257 01NS01ED0027 | 0.4 | 5 | | 0.1 | 0.30 | 0.38 | 0.26 | 2.7 | 4.2 |
| 258 01NS01ED0027 | 0.3 | 5 | | 0.2 | 0.40 | 0.30 | 0.26 | 2.6 | 4.2 |
| 259 01NS01ED0027 | 0.3 | 5 | | 0.1 | 0.20 | 0.35 | 0.26 | 2.6 | 4.3 |
| 260 01NS01ED0027 | 0.3 | 5 | | -0.1 | 0.34 | 0.36 | 0.24 | 2.6 | 4.3 |
| 261 01NS01ED0028 | | 50 | | 2.0 | 1.10 | | 0.20 | 2.6 | 3.7 |
| 262 01NS01ED0028 | 0.4 | 70 | | 3.5 | 1.30 | 0.60 | 0.10 | 2.8 | 3.6 |
| 263 01NS01ED0028 | 0.5 | 45 | | 1.7 | 0.95 | 0.46 | 0.10 | 2.5 | 3.8 |
| 264 01NS01ED0028 | 0.6 | 70 | 3.4 | | 1.40 | 0.62 | 0.27 | 2.8 | 3.6 |
| 265 01NS01ED0028 | 0.5 | 40 | | 1.9 | 1.00 | 0.35 | 0.20 | 2.7 | 3.9 |
| 266 01NS01ED0029 | | 80 | | -1.1 | 0.35 | | 0.20 | 2.5 | 3.9 |
| 267 01NS01ED0029 | 0.6 | 55 | | -1.3 | 0.31 | 0.35 | 0.20 | 2.8 | 3.8 |
| 268 01NS01ED0029 | 0.6 | 70 | | -1.2 | 0.34 | 0.38 | 0.20 | 2.6 | 3.9 |
| 269 01NS01ED0029 | 0.7 | 80 | | -0.6 | 0.44 | 0.34 | 0.27 | 2.9 | 4.1 |
| 270 01NS01ED0029 | 0.5 | 60 | | -1.2 | 0.35 | 0.31 | 0.30 | 3.1 | 4.3 |
| 271 01NS01ED0030 | | 5 | | 0.6 | 0.65 | | 0.20 | 2.4 | 3.9 |
| 272 01NS01ED0030 | 0.4 | 5 | | 0.9 | 0.63 | 0.35 | 0.20 | 2.7 | 4.2 |
| 273 01NS01ED0030 | 0.4 | 10 | | 0.8 | 0.63 | 0.37 | 0.20 | 2.6 | 3.9 |
| 274 01NS01ED0030 | 0.3 | 5 | 0.8 | | 0.63 | 0.36 | 0.25 | 2.7 | 4.0 |
| 275 01NS01ED0030 | 0.4 | 5 | | 0.7 | 0.70 | 0.38 | 0.25 | 2.7 | 4.1 |
| 276 01NS01ED0030 | 0.3 | 5 | | 0.7 | 0.69 | 0.40 | 0.20 | 2.7 | 4.1 |
| 277 01NS01ED0043 | | 100 | | -1.2 | 0.35 | | 0.20 | 2.2 | 3.5 |
| 278 01NS01ED0043 | 0.5 | 65 | | -0.7 | 0.25 | 0.30 | 0.20 | 2.5 | 3.3 |
| 279 01NS01ED0043 | 0.5 | 90 | | -1.1 | 0.32 | 0.34 | 0.20 | 2.4 | 3.6 |
| 280 01NS01ED0043 | | | | | | | | | |
| 281 01NS01ED0043 | | | | | | | | | |
| 282 01NS01ED0043 | | | | | | | | | |
| 283 01NS01ED0043 | 0.6 | 80 | | -1.1 | 0.30 | 0.31 | 0.25 | 2.5 | 3.7 |
| 284 01NS01ED0043 | 0.6 | | | -0.5 | 0.32 | 0.35 | 0.27 | 2.6 | 3.8 |
| 285 01NS01ED0043 | 0.6 | | | -0.6 | 0.30 | 0.34 | 0.27 | 2.6 | 3.9 |
| 286 01NS01ED0043 | 0.6 | | | -0.6 | 0.28 | 0.34 | 0.27 | 2.6 | 3.8 |
| 287 01NS01ED0047 | | 90 | | -0.4 | 0.60 | | 0.20 | 2.6 | 4.2 |
| 288 01NS01ED0047 | | | | | | | | | |
| 289 01NS01ED0047 | | | | | | | | | |
| 290 01NS01ED0047 | | | | | | | | | |
| 291 01NS01ED0047 | 1.2 | 70 | | 0.4 | 0.65 | 0.44 | 0.20 | 3.0 | 4.3 |
| 292 01NS01ED0047 | 0.5 | 70 | | -0.4 | 0.62 | 0.44 | 0.20 | 2.7 | 4.4 |
| 293 01NS01ED0047 | 0.8 | 90 | | 0.3 | 0.68 | 0.42 | 0.25 | 3.1 | 4.5 |
| 294 01NS01ED0047 | 0.5 | 60 | | -0.4 | 0.70 | 0.46 | 0.30 | 3.1 | 4.9 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P06107L | 23 P07110L | 24 P07601L | 25 P14102L | 26 P29305P | 27 P30304P | 28 P48302P |
|---|---|---|---|---|---|---|---|---|---|
| 246 01NS01ED0022 | 2.9 | 3.0 | 5.1 | 0.01 | 0.10 | 1.4 | 0.002 | 0.01 | 0.001 |
| 247 01NS01ED0025 | 3.7 | 2.3 | 8.3 | 0.01 | 0.13 |  |  | 0.01 | 0.003 |
| 248 01NS01ED0025 | 3.0 | 2.6 | 5.6 | 0.01 | 0.10 | 1.1 | 0.004 | 0.02 | 0.001 |
| 249 01NS01ED0025 | 3.2 | 2.5 | 9.0 | 0.01 | 0.08 | 2.7 | 0.002 | 0.01 | 0.001 |
| 250 01NS01ED0025 | 3.4 | 2.7 | 7.9 | 0.01 | 0.10 | 1.3 | 0.002 | 0.01 | 0.001 |
| 251 01NS01ED0025 | 3.2 |  | 5.0 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 252 01NS01ED0025 | 3.3 |  | 5.3 | 0.01 | 0.10 | 1.0 | 0.002 | 0.01 | 0.001 |
| 253 01NS01ED0027 | 2.0 | 1.7 | 2.5 | 0.01 | 0.10 |  |  | 0.01 | 0.001 |
| 254 01NS01ED0027 | 2.1 | 2.2 | 1.9 | 0.01 | 0.12 | 0.7 | 0.002 | 0.02 | 0.001 |
| 255 01NS01ED0027 | 1.7 |  | 2.3 | 0.01 | 0.07 | 0.5 | 0.002 | 0.01 | 0.001 |
| 256 01NS01ED0027 | 2.1 |  | 1.6 | 0.01 | 0.10 | 0.5 | 0.002 | 0.01 | 0.001 |
| 257 01NS01ED0027 | 2.2 |  | 2.3 | 0.01 | 0.10 | 0.1 | 0.002 | 0.01 | 0.001 |
| 258 01NS01ED0027 | 2.0 |  | 2.1 | 0.01 | 0.10 | 0.1 | 0.002 | 0.01 | 0.001 |
| 259 01NS01ED0027 | 2.2 |  | 2.2 | 0.01 | 0.10 | 0.1 | 0.002 | 0.01 | 0.001 |
| 260 01NS01ED0027 | 2.3 |  | 2.0 | 0.01 | 0.10 | 0.5 | 0.002 | 0.01 | 0.001 |
| 261 01NS01ED0028 | 2.7 | 1.5 | 6.9 | 0.01 | 0.13 |  |  | 0.01 | 0.001 |
| 262 01NS01ED0028 | 2.5 | 1.2 | 9.7 | 0.01 | 0.14 | 1.5 | 0.002 | 0.01 | 0.001 |
| 263 01NS01ED0028 | 2.5 | 2.0 | 6.0 | 0.01 | 0.09 | 1.5 | 0.002 | 0.01 | 0.001 |
| 264 01NS01ED0028 | 2.1 | 1.0 | 11.0 | 0.01 | 0.15 | 2.2 | 0.002 | 0.01 | 0.001 |
| 265 01NS01ED0028 | 2.8 | 2.0 | 6.6 | 0.01 | 0.11 | 0.2 | 0.002 | 0.01 | 0.001 |
| 266 01NS01ED0029 | 3.7 | 2.1 | 8.1 | 0.01 | 0.11 |  |  | 0.01 | 0.001 |
| 267 01NS01ED0029 | 3.1 | 2.7 | 6.3 | 0.23 | 0.31 | 2.2 | 0.002 | 0.02 | 0.001 |
| 268 01NS01ED0029 | 3.2 | 2.3 | 9.0 | 0.01 | 0.09 | 3.2 | 0.002 | 0.01 | 0.001 |
| 269 01NS01ED0029 | 2.5 | 2.1 | 9.2 | 0.01 | 0.11 | 2.2 | 0.002 | 0.01 | 0.001 |
| 270 01NS01ED0029 | 3.4 | 2.5 | 8.0 | 0.01 | 0.10 | 2.4 | 0.002 | 0.01 | 0.001 |
| 271 01NS01ED0030 | 2.3 | 2.1 | 3.2 | 0.01 | 0.10 |  |  | 0.01 | 0.001 |
| 272 01NS01ED0030 | 2.5 | 2.4 | 2.6 | 0.01 | 0.11 | 1.0 | 0.002 | 0.02 | 0.001 |
| 273 01NS01ED0030 | 2.1 |  | 3.6 | 0.01 | 0.06 | 1.8 | 0.002 | 0.01 | 0.001 |
| 274 01NS01ED0030 | 3.0 |  | 2.4 | 0.01 | 0.10 | 0.7 | 0.002 | 0.01 | 0.001 |
| 275 01NS01ED0030 | 2.5 |  | 3.0 | 0.01 | 0.10 | 0.4 | 0.002 | 0.01 | 0.001 |
| 276 01NS01ED0030 | 2.4 |  | 2.6 | 0.01 | 0.10 | 0.8 | 0.002 | 0.01 | 0.001 |
| 277 01NS01ED0043 | 3.5 | 1.7 | 8.8 | 0.01 | 0.11 |  |  | 0.01 | 0.001 |
| 278 01NS01ED0043 | 3.0 | 2.0 | 6.9 | 0.01 | 0.11 | 1.0 | 0.002 | 0.02 | 0.001 |
| 279 01NS01ED0043 | 2.9 | 1.6 | 6.7 | 0.01 | 0.09 | 0.9 | 0.002 | 0.01 | 0.001 |
| 280 01NS01ED0043 |  |  |  |  |  |  | 0.002 | 0.01 | 0.001 |
| 281 01NS01ED0043 |  |  |  |  |  |  | 0.002 | 0.01 | 0.001 |
| 282 01NS01ED0043 |  |  |  |  |  |  | 0.002 | 0.01 | 0.001 |
| 283 01NS01ED0043 | 3.0 | 1.7 | 8.9 | 0.01 | 0.10 | 0.4 | 0.002 | 0.01 | 0.001 |
| 284 01NS01ED0043 | 3.0 | 1.8 | 7.8 | 0.01 | 0.11 | 1.5 | 0.002 | 0.01 | 0.001 |
| 285 01NS01ED0043 | 3.0 | 1.8 | 7.5 | 0.01 | 0.12 | 1.5 | 0.002 | 0.01 | 0.001 |
| 286 01NS01ED0043 | 3.2 | 1.9 | 7.8 | 0.01 | 0.12 | 1.5 | 0.002 | 0.01 | 0.001 |
| 287 01NS01ED0047 | 3.5 | 2.1 | 7.6 | 0.01 | 0.10 |  |  | 0.01 | 0.001 |
| 288 01NS01ED0047 |  |  |  |  |  |  |  |  |  |
| 289 01NS01ED0047 |  |  |  |  |  |  |  |  |  |
| 290 01NS01ED0047 |  |  |  |  |  |  |  |  |  |
| 291 01NS01ED0047 | 3.0 | 2.3 | 6.5 | 0.01 | 0.11 | 2.0 | 0.002 | 0.02 | 0.001 |
| 292 01NS01ED0047 | 3.2 | 2.5 | 8.0 | 0.01 | 0.08 | 0.9 | 0.002 | 0.01 | 0.001 |
| 293 01NS01ED0047 | 3.0 | 2.0 | 9.1 | 0.01 | 0.11 | 1.8 | 0.002 | 0.01 | 0.001 |
| 294 01NS01ED0047 | 3.4 | 2.6 | 7.5 | 0.01 | 0.10 | 2.4 | 0.002 | 0.01 | 0.001 |

APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 29 P82302P | 30 P13305P | 31 P26304P | 32 P25304P | 33 ORGANIC ANION MEQ/L |
|---|---|---|---|---|---|
| 246 01NS01ED0022 | 0.002 | 0.150 | 0.120 | 0.012 | 0.038057 |
| 247 01NS01ED0025 | 0.003 | 0.330 | 0.150 | 0.010 | 0.058322 |
| 248 01NS01ED0025 | 0.002 | 0.180 | 0.080 | 0.010 | 0.042942 |
| 249 01NS01ED0025 | 0.002 | 0.280 | 0.120 | 0.010 | 0.056985 |
| 250 01NS01ED0025 | 0.002 | 0.300 | 0.140 | 0.010 | 0.053715 |
| 251 01NS01ED0025 | 0.002 | 0.180 | 0.099 | 0.011 | 0.037311 |
| 252 01NS01ED0025 | 0.002 | 0.190 | 0.088 | 0.012 | 0.039549 |
| 253 01NS01ED0027 | 0.002 | 0.053 | | 0.020 | 0.020993 |
| 254 01NS01ED0027 | 0.002 | 0.018 | | 0.010 | 0.016251 |
| 255 01NS01ED0027 | 0.002 | 0.052 | 0.010 | 0.010 | 0.018930 |
| 256 01NS01ED0027 | 0.002 | 0.010 | | 0.010 | 0.014133 |
| 257 01NS01ED0027 | 0.002 | 0.010 | | 0.010 | 0.019313 |
| 258 01NS01ED0027 | 0.002 | 0.030 | | 0.020 | 0.017634 |
| 259 01NS01ED0027 | 0.002 | 0.010 | | 0.010 | 0.018474 |
| 260 01NS01ED0027 | 0.002 | 0.010 | | 0.010 | 0.017397 |
| 261 01NS01ED0028 | 0.002 | 0.100 | 0.230 | 0.020 | 0.063306 |
| 262 01NS01ED0028 | 0.002 | 0.075 | 0.280 | 0.010 | 0.087988 |
| 263 01NS01ED0028 | 0.002 | 0.077 | 0.100 | 0.010 | 0.053743 |
| 264 01NS01ED0028 | 0.002 | 0.072 | 0.400 | 0.020 | 0.104508 |
| 265 01NS01ED0028 | 0.002 | 0.070 | 0.250 | 0.020 | 0.059868 |
| 266 01NS01ED0029 | 0.003 | 0.280 | 0.130 | 0.010 | 0.055075 |
| 267 01NS01ED0029 | 0.002 | 0.210 | 0.120 | 0.020 | 0.042836 |
| 268 01NS01ED0029 | 0.002 | 0.200 | 0.110 | 0.010 | 0.056985 |
| 269 01NS01ED0029 | 0.002 | 0.210 | 0.190 | 0.020 | 0.066681 |
| 270 01NS01ED0029 | 0.002 | 0.290 | 0.150 | 0.010 | 0.054395 |
| 271 01NS01ED0030 | 0.002 | 0.070 | | 0.010 | 0.028663 |
| 272 01NS01ED0030 | 0.002 | 0.031 | | 0.010 | 0.022966 |
| 273 01NS01ED0030 | 0.002 | 0.085 | 0.010 | 0.010 | 0.031799 |
| 274 01NS01ED0030 | 0.002 | 0.022 | | 0.010 | 0.022246 |
| 275 01NS01ED0030 | 0.002 | 0.080 | | 0.010 | 0.026872 |
| 276 01NS01ED0030 | 0.002 | 0.035 | | 0.010 | 0.023854 |
| 277 01NS01ED0043 | 0.002 | 0.170 | 0.180 | 0.010 | [illegible] |
| 278 01NS01ED0043 | 0.002 | 0.140 | 0.200 | 0.010 | 0.050011 |
| 279 01NS01ED0043 | 0.003 | 0.140 | 0.140 | 0.020 | 0.044001 |
| 280 01NS01ED0043 | 0.002 | 0.120 | 0.240 | 0.010 | |
| 281 01NS01ED0043 | 0.002 | 0.150 | 0.240 | 0.010 | |
| 282 01NS01ED0043 | 0.002 | 0.100 | 0.220 | 0.010 | |
| 283 01NS01ED0043 | 0.002 | 0.200 | 0.250 | 0.010 | 0.060515 |
| 284 01NS01ED0043 | 0.002 | 0.170 | 0.300 | 0.017 | 0.056534 |
| 285 01NS01ED0043 | 0.002 | 0.160 | 0.280 | 0.021 | 0.054360 |
| 286 01NS01ED0043 | 0.002 | 0.170 | 0.320 | 0.020 | 0.056534 |
| 287 01NS01ED0047 | 0.002 | 0.170 | 0.190 | 0.020 | 0.056712 |
| 288 01NS01ED0047 | | | | | |
| 289 01NS01ED0047 | | | | | |
| 290 01NS01ED0047 | | | | | |
| 291 01NS01ED0047 | 0.004 | 0.160 | 0.230 | 0.030 | 0.054581 |
| 292 01NS01ED0047 | 0.002 | 0.140 | 0.160 | 0.020 | 0.054395 |
| 293 01NS01ED0047 | 0.002 | 0.190 | 0.280 | 0.030 | 0.074896 |
| 294 01NS01ED0047 | 0.002 | 0.180 | 0.180 | 0.030 | 0.055966 |

## APPENDIX 1 : WATER QUALITY DATA FOR THE NOVA SCOTIA LRTAP LAKES

| 0 NAQUADAT NUMBER | 1 LAKE # | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|
| 295 01NS01ED0047 | 43 | 501851 | 23-OCT-85 | 955 | 244 | | | 5.2 | 25.0 | 29 |
| 296 01NS01ED0048 | 44 | 300691 | 26-MAY-83 | 1201 | 244 | | | 4.9 | | 28 |
| 297 01NS01ED0048 | 44 | 302278 | 18-OCT-83 | 1105 | 244 | 13.0 | | 5.5 | 22.0 | 26 |
| 298 01NS01ED0048 | 44 | 400344 | 03-MAY-84 | 850 | 244 | 9.5 | 4.8 | 4.7 | 32.0 | 29 |
| 299 01NS01ED0048 | 44 | 402740 | 17-OCT-84 | 1205 | 244 | 10.0 | 5.3 | 5.3 | | 27 |
| 300 01NS01ED0048 | 44 | 500600 | 03-JUN-85 | 1130 | 244 | | 4.9 | 4.9 | 36.0 | 31 |

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 295 01NS01ED0047 | 0.5 | 80 | | 0.2 | 0.70 | 0.46 | 0.24 | 3.3 | 4.8 |
| 296 01NS01ED0048 | | 80 | | -0.4 | 0.60 | | 0.20 | 2.7 | 4.0 |
| 297 01NS01ED0048 | 1.2 | 55 | | 0.5 | 0.70 | 0.40 | 0.20 | 2.9 | 4.3 |
| 298 01NS01ED0048 | 0.5 | 70 | | -0.3 | 0.72 | 0.43 | 0.20 | 2.8 | 4.5 |
| 299 01NS01ED0048 | 1.1 | 90 | | 0.2 | 0.68 | 0.41 | 0.25 | 3.1 | 4.5 |
| 300 01NS01ED0048 | 0.5 | 60 | | -0.3 | 0.60 | 0.50 | 0.30 | 3.3 | 4.8 |

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P06107L | 23 P07110L | 24 P07601L | 25 P14102L | 26 P29305P | 27 P30304P | 28 P48302P |
|---|---|---|---|---|---|---|---|---|---|
| 295 01NS01ED0047 | 3.2 | 2.2 | 6.8 | 0.01 | 0.10 | 1.4 | 0.002 | 0.01 | 0.001 |
| 296 01NS01ED0048 | 3.7 | 2.1 | 7.5 | 0.01 | 0.10 | | | 0.01 | 0.001 |
| 297 01NS01ED0048 | 2.8 | 2.3 | 6.0 | 0.01 | 0.11 | 1.7 | 0.002 | 0.02 | 0.001 |
| 298 01NS01ED0048 | 3.2 | 2.5 | 7.4 | 0.01 | 0.08 | 2.8 | 0.002 | 0.01 | 0.001 |
| 299 01NS01ED0048 | 4.4 | 2.0 | 7.8 | 0.01 | 0.10 | 1.6 | 0.002 | 0.01 | 0.001 |
| 300 01NS01ED0048 | 3.4 | 2.4 | 7.5 | 0.01 | 0.10 | 2.3 | 0.002 | 0.01 | 0.001 |

| 0 NAQUADAT NUMBER | 29 P82302P | 30 P13305P | 31 P26304P | 32 P25304P | 33 ORGANIC ANION MEQ/L |
|---|---|---|---|---|---|
| 295 01NS01ED0047 | 0.002 | 0.150 | 0.220 | 0.037 | 0.054760 |
| 296 01NS01ED0048 | 0.002 | 0.180 | 0.190 | 0.030 | 0.055966 |
| 297 01NS01ED0048 | 0.002 | 0.130 | 0.210 | 0.020 | 0.051320 |
| 298 01NS01ED0048 | 0.002 | 0.140 | 0.150 | 0.030 | 0.051997 |
| 299 01NS01ED0048 | 0.002 | 0.180 | 0.270 | 0.030 | 0.064196 |
| 300 01NS01ED0048 | 0.002 | 0.110 | 0.200 | 0.030 | 0.055966 |

# APPENDIX II

## WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| | 0 NAQUADAT NUMBER | 1 LAKE NUMBER | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 01NF02YH0001 | 1 | 400856 | 08-JUN-84 | 1025 | 236 | 7.0 | 6.60 | 6.7 | 50 | 52 |
| 2 | 01NF02YH0001 | 1 | 402425 | 25-SEP-84 | 1345 | 236 | 12.0 | 6.50 | 7.5 | | 56 |
| 3 | 01NF02YH0001 | 1 | 500736 | 12-JUN-85 | 1530 | T236 | 3.5 | 6.90 | 7.3 | 50 | 56 |
| 4 | 01NF02YH0001 | 1 | 500737 | 12-JUN-85 | 1532 | T236 | 3.5 | 6.80 | 7.4 | 50 | 56 |
| 5 | 01NF02YH0001 | 1 | 500738 | 12-JUN-85 | 1534 | T236 | 3.5 | 6.90 | 7.3 | 50 | 56 |
| 6 | 01NF02YH0001 | 1 | 501594 | 25-SEP-85 | 914 | 236 | 11.5 | 6.30 | 7.5 | 60 | 58 |
| 7 | 01NF02YH0011 | 2 | 402433 | 25-SEP-84 | 1415 | 236 | 9.0 | 5.60 | 5.9 | | 14 |
| 8 | 01NF02YH0011 | 2 | 500744 | 12-JUN-85 | 1630 | T236 | 1.5 | 5.40 | 5.6 | 13 | 18 |
| 9 | 01NF02YH0011 | 2 | 500745 | 12-JUN-85 | 1632 | T236 | 1.5 | 5.50 | 5.5 | 13 | 18 |
| 10 | 01NF02YH0011 | 2 | 500746 | 12-JUN-85 | 1634 | T236 | 1.5 | 5.40 | 5.5 | 13 | 18 |
| 11 | 01NF02YH0011 | 2 | 501602 | 25-SEP-85 | 955 | 236 | 9.2 | 5.70 | 5.7 | 15 | 16 |
| 12 | 01NF02YH0012 | 3 | 402429 | 25-SEP-84 | 1410 | 236 | 7.0 | 6.20 | 6.3 | | 15 |
| 13 | 01NF02YH0012 | 3 | 500742 | 12-JUN-85 | 1620 | 236 | 1.8 | 5.50 | 5.7 | 12 | 15 |
| 14 | 01NF02YH0012 | 3 | 501600 | 25-SEP-85 | 950 | 236 | 7.8 | 6.60 | 6.1 | 14 | 15 |
| 15 | 01NF02YH0013 | 4 | 402430 | 25-SEP-84 | 1430 | T236 | 8.5 | 5.20 | 5.4 | | 16 |
| 16 | 01NF02YH0013 | 4 | 402431 | 25-SEP-84 | 1432 | T236 | | | 5.2 | | 16 |
| 17 | 01NF02YH0013 | 4 | 402432 | 25-SEP-84 | 1435 | T236 | | | 5.4 | | 16 |
| 18 | 01NF02YH0013 | 4 | 500743 | 12-JUN-85 | 1635 | 236 | 1.5 | 5.00 | 5.1 | 15 | 18 |
| 19 | 01NF02YH0013 | 4 | 501601 | 25-SEP-85 | 1000 | 236 | 9.2 | 5.40 | 5.3 | 16 | 16 |
| 20 | 01NF02YH0014 | 5 | 402426 | 25-SEP-84 | 1440 | 236 | 9.0 | 4.90 | 5.4 | | 13 |
| 21 | 01NF02YH0014 | 5 | 500739 | 12-JUN-85 | 1545 | 236 | 3.8 | 4.90 | 5.0 | 10 | 16 |
| 22 | 01NF02YH0014 | 5 | 501595 | 25-SEP-85 | 926 | 236 | 9.9 | 5.60 | 5.4 | 14 | 15 |
| 23 | 01NF02YH0015 | 6 | 402427 | 25-SEP-84 | 1450 | 236 | 10.5 | 5.20 | 5.2 | | 14 |
| 24 | 01NF02YH0015 | 6 | 500740 | 12-JUN-85 | 1555 | 236 | 4.2 | 4.90 | 5.0 | 12 | 19 |
| 25 | 01NF02YH0015 | 6 | 501596 | 25-SEP-85 | 930 | 236 | 10.6 | 5.30 | 5.3 | 16 | 17 |
| 26 | 01NF02YK0006 | 7 | 3207 | 04-NOV-80 | 1011 | 236 | | | 6.5 | 24 | 29 |
| 27 | 01NF02YK0006 | 7 | 302168 | 04-OCT-83 | 1222 | 236 | | | 6.1 | | 25 |
| 28 | 01NF02YK0006 | 7 | 400855 | 06-JUN-84 | 1435 | 236 | 9.5 | 6.40 | 6.3 | 18 | 18 |
| 29 | 01NF02YK0006 | 7 | 402424 | 25-SEP-84 | 1245 | 236 | 11.5 | 6.00 | 6.9 | | 24 |
| 30 | 01NF02YK0006 | 7 | 500735 | 11-JUN-85 | 1540 | 236 | 9.9 | 5.90 | 6.4 | 18 | 21 |
| 31 | 01NF02YK0006 | 7 | 501593 | 24-SEP-85 | 1728 | 236 | 12.2 | 6.10 | 6.9 | 28 | 28 |
| 32 | 01NF02YL0001 | 8 | 3274 | 10-NOV-80 | 1011 | 236 | | | 6.8 | 24 | 28 |
| 33 | 01NF02YL0001 | 8 | 302169 | 04-OCT-83 | 1125 | 236 | | | 6.1 | | 28 |
| 34 | 01NF02YL0001 | 8 | 400860 | 08-JUN-84 | 930 | 236 | 10.5 | 6.80 | 6.3 | 16 | 19 |
| 35 | 01NF02YL0001 | 8 | 402434 | 25-SEP-84 | 1515 | 236 | 12.0 | 6.30 | 7.0 | | 26 |
| 36 | 01NF02YL0001 | 8 | 500747 | 11-JUN-85 | 1440 | 236 | 5.4 | 6.00 | 6.7 | 22 | 24 |
| 37 | 01NF02YL0001 | 8 | 501603 | 25-SEP-85 | 1255 | T236 | 12.2 | 6.50 | 6.9 | 32 | 31 |
| 38 | 01NF02YL0001 | 8 | 501604 | 25-SEP-85 | 1257 | T236 | 12.2 | 6.50 | 7.0 | 32 | 31 |
| 39 | 01NF02YL0001 | 8 | 501605 | 25-SEP-85 | 1259 | T236 | 12.2 | 6.50 | 6.9 | 32 | 31 |
| 40 | 01NF02YL0010 | 9 | 402428 | 25-SEP-84 | 1500 | 236 | 10.0 | 5.20 | 5.3 | | 12 |
| 41 | 01NF02YL0010 | 9 | 500741 | 12-JUN-85 | 1600 | 236 | 5.0 | 4.90 | 5.0 | 10 | 20 |
| 42 | 01NF02YL0010 | 9 | 501597 | 25-SEP-85 | 938 | T236 | 10.1 | 5.40 | 5.3 | 14 | 16 |
| 43 | 01NF02YL0010 | 9 | 501598 | 25-SEP-85 | 940 | T236 | 10.1 | 3.40 | 5.3 | 14 | 16 |
| 44 | 01NF02YL0010 | 9 | 501599 | 25-SEP-85 | 942 | T236 | 10.1 | 5.40 | 5.3 | 14 | 16 |
| 45 | 01NF02YM0001 | 10 | 3203 | 04-NOV-80 | 1011 | 236 | | 6.05 | 6.4 | 16 | 21 |
| 46 | 01NF02YM0001 | 10 | 302170 | 04-OCT-83 | 1021 | 236 | | | 6.0 | | 18 |
| 47 | 01NF02YM0001 | 10 | 402438 | 25-SEP-84 | 1605 | 236 | 12.0 | 5.00 | 6.4 | | 18 |
| 48 | 01NF02YM0001 | 10 | 500751 | 11-JUN-85 | 1335 | 236 | 5.7 | 5.30 | 6.3 | 15 | 18 |
| 49 | 01NF02YM0001 | 10 | 501611 | 25-SEP-85 | 1154 | 236 | 12.0 | 6.00 | 6.4 | 19 | 18 |
| 50 | 01NF02YM0003 | 11 | 3199 | 04-NOV-80 | 2010 | 236 | | | 6.6 | | 17 |
| 51 | 01NF02YM0003 | 11 | 301004 | 18-JUN-83 | 1321 | 236 | | 5.90 | 5.9 | | 16 |
| 52 | 01NF02YM0003 | 11 | 302171 | 04-OCT-83 | 1101 | 236 | | | 5.9 | | 15 |
| 53 | 01NF02YM0003 | 11 | 400861 | 08-JUN-84 | 905 | 236 | 10.0 | 6.30 | 6.0 | 10 | 12 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 1 01NF02YH0001 | 0.3 | 15 | 17.7 |  | 7.60 | 0.84 | 0.20 | 1.7 | 3.0 |
| 2 01NF02YH0001 | 0.2 | 20 | 18.9 |  | 7.70 | 0.84 | 0.19 | 2.0 | 2.4 |
| 3 01NF02YH0001 | 0.2 | 5 | 18.4 |  | 8.00 | 0.90 | 0.16 | 2.0 | 3.6 |
| 4 01NF02YH0001 | 0.2 | 5 | 18.4 |  | 8.00 | 0.85 | 0.16 | 2.0 | 3.6 |
| 5 01NF02YH0001 | 0.2 | 5 | 18.4 |  | 7.50 | 0.90 | 0.16 | 2.0 | 3.6 |
| 6 01NF02YH0001 | 0.3 | 5 | 19.5 |  | 7.90 | 0.85 | 0.20 | 2.1 | 3.6 |
| 7 01NF02YH0011 | 0.3 | 10 |  | 0.30 | 0.45 | 0.25 | 0.15 | 1.4 | 2.0 |
| 8 01NF02YH0011 | 0.3 | 5 |  | 0.40 | 0.50 | 0.35 | 0.16 | 1.7 | 3.0 |
| 9 01NF02YH0011 | 0.3 | 5 |  | 0.40 | 0.55 | 0.35 | 0.16 | 1.7 | 3.1 |
| 10 01NF02YH0011 | 0.2 | 5 |  | 0.20 | 0.55 | 0.35 | 0.16 | 1.7 | 3.1 |
| 11 01NF02YH0011 | 0.4 | 5 |  | 0.30 | 0.46 | 0.25 | 0.20 | 1.4 | 2.6 |
| 12 01NF02YH0012 | 0.3 | 5 | 1.2 |  | 0.48 | 0.25 | 0.22 | 1.6 | 1.7 |
| 13 01NF02YH0012 | 0.4 | 5 |  | 0.70 | 0.40 | 0.25 | 0.20 | 1.5 | 2.6 |
| 14 01NF02YH0012 | 0.4 | 5 | 1.1 |  | 0.46 | 0.23 | 0.22 | 1.7 | 2.2 |
| 15 01NF02YH0013 | 0.2 | 5 |  | -0.20 | 0.29 | 0.24 | 0.15 | 1.6 | 2.5 |
| 16 01NF02YH0013 | 0.3 | 5 |  | -0.50 | 0.28 | 0.23 | 0.19 | 1.6 | 2.5 |
| 17 01NF02YH0013 | 0.2 | 5 |  | -0.30 | 0.27 | 0.23 | 0.15 | 1.5 | 2.5 |
| 18 01NF02YH0013 | 0.2 | 5 |  | -0.30 | 0.30 | 0.30 | 0.14 | 1.7 | 3.0 |
| 19 01NF02YH0013 | 0.3 | 5 |  | -0.20 | 0.28 | 0.23 | 0.15 | 1.4 | 2.9 |
| 20 01NF02YH0014 | 0.5 | 40 |  | -0.10 | 0.42 | 0.24 | 0.15 | 1.0 | 1.3 |
| 21 01NF02YH0014 | 0.6 | 20 |  | -0.30 | 0.50 | 0.25 | 0.16 | 1.2 | 2.3 |
| 22 01NF02YH0014 | 0.6 | 10 |  | 0.10 | 0.43 | 0.21 | 0.20 | 1.2 | 2.2 |
| 23 01NF02YH0015 | 0.3 | 45 |  | -0.10 | 0.49 | 0.23 | 0.19 | 1.2 | 1.6 |
| 24 01NF02YH0015 | 0.4 | 20 |  | -0.30 | 0.40 | 0.30 | 0.20 | 1.5 | 2.8 |
| 25 01NF02YH0015 | 0.5 | 15 |  | 0.20 | 0.53 | 0.25 | 0.22 | 1.4 | 2.6 |
| 26 01NF02YK0006 | 0.6 | 60 | 8.0 |  | 2.90 | 0.54 | 0.20 | 1.9 | 3.2 |
| 27 01NF02YK0006 | 0.4 | 65 | 5.5 |  | 2.80 |  | 0.10 | 1.4 | 2.0 |
| 28 01NF02YK0006 | 0.3 | 60 | 3.6 |  | 1.78 | 0.34 | 0.10 | 1.0 | 1.6 |
| 29 01NF02YK0006 | 0.4 | 60 | 4.9 |  | 2.60 | 0.44 | 0.19 | 1.5 | 1.4 |
| 30 01NF02YK0006 | 0.4 | 50 | 3.0 |  | 2.00 | 0.35 | 0.16 | 1.5 | 2.4 |
| 31 01NF02YK0006 | 0.4 | 15 | 5.8 |  | 2.80 | 0.47 | 0.20 | 1.7 | 2.5 |
| 32 01NF02YL0001 | 0.8 | 70 | 9.3 |  | 2.70 | 0.50 | 0.20 | 2.2 | 2.3 |
| 33 01NF02YL0001 | 1.2 | 40 | 7.3 |  | 2.80 |  | 0.10 | 2.0 | 2.1 |
| 34 01NF02YL0001 | 0.5 | 40 | 4.6 |  | 1.83 | 0.31 | 0.10 | 1.1 | 1.7 |
| 35 01NF02YL0001 | 0.8 | 35 | 6.3 |  | 2.60 | 0.44 | 0.15 | 2.2 | 1.7 |
| 36 01NF02YL0001 | 0.5 | 20 | 4.8 |  | 2.00 | 0.40 | 0.14 | 1.9 | 2.7 |
| 37 01NF02YL0001 | 0.6 | 5 | 6.9 |  | 2.70 | 0.47 | 0.20 | 2.5 | 3.2 |
| 38 01NF02YL0001 | 0.6 | 5 | 7.1 |  | 2.70 | 0.47 | 0.20 | 2.5 | 3.0 |
| 39 01NF02YL0001 | 0.6 | 5 | 7.1 |  | 2.70 | 0.47 | 0.20 | 2.5 | 3.2 |
| 40 01NF02YL0010 | 0.4 | 30 |  | -0.20 | 0.36 | 0.19 | 0.15 | 1.0 | 1.3 |
| 41 01NF02YL0010 | 0.4 | 20 |  | -0.30 | 0.40 | 0.30 | 0.16 | 1.6 | 3.1 |
| 42 01NF02YL0010 | 0.5 | 5 |  | -0.10 | 0.41 | 0.23 | 0.20 | 1.3 | 2.5 |
| 43 01NF02YL0010 | 0.5 | 5 |  | -0.10 | 0.39 | 0.23 | 0.20 | 1.4 | 2.5 |
| 44 01NF02YL0010 | 0.5 | 5 |  | 0.10 | 0.39 | 0.23 | 0.20 | 1.3 | 2.5 |
| 45 01NF02YM0001 | 0.2 | 10 | 4.7 |  | 0.72 | 0.46 | 0.20 | 2.0 | 3.6 |
| 46 01NF02YM0001 | 0.3 | 30 |  | 1.70 | 1.00 |  | 0.20 | 1.7 | 2.4 |
| 47 01NF02YM0001 | 0.2 | 5 | 1.2 |  | 0.62 | 0.39 | 0.22 | 1.9 | 2.5 |
| 48 01NF02YM0001 | 0.2 | 5 | 1.5 |  | 0.65 | 0.45 | 0.15 | 1.7 | 2.8 |
| 49 01NF02YM0001 | 0.3 | 5 | 1.5 |  | 0.69 | 0.43 | 0.25 | 1.9 | 3.0 |
| 50 01NF02YM0003 | 0.3 | 50 | 4.5 |  | 0.92 | 0.70 | 0.10 | 1.2 | 1.6 |
| 51 01NF02YM0003 | 0.5 | 40 |  | 2.00 | 0.50 |  | 0.20 | 0.9 | 1.4 |
| 52 01NF02YM0003 | 0.4 | 50 |  | 2.00 | 0.80 |  | 0.10 | 0.9 | 1.3 |
| 53 01NF02YM0003 | 0.4 | 50 |  | 1.70 | 0.63 | 0.52 | 0.10 | 0.6 | 1.1 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| | 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P29305L | 23 P30304L | 24 P48302L | 25 P82302L | 26 P13305L | 27 P26304L | 28 P25304L |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 01NF02YH0001 | 2.0 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.022 | 0.030 | 0.010 |
| 2 | 01NF02YH0001 | 2.0 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.020 | 0.050 | 0.010 |
| 3 | 01NF02YH0001 | 2.2 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | | 0.010 |
| 4 | 01NF02YH0001 | 2.2 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | | 0.010 |
| 5 | 01NF02YH0001 | 2.2 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | | 0.010 |
| 6 | 01NF02YH0001 | 2.2 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | | 0.010 |
| 7 | 01NF02YH0011 | 1.5 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.100 | 0.050 | 0.010 |
| 8 | 01NF02YH0011 | 1.9 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.120 | 0.093 | 0.010 |
| 9 | 01NF02YH0011 | 1.9 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.110 | 0.090 | 0.010 |
| 10 | 01NF02YH0011 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.110 | 0.079 | 0.010 |
| 11 | 01NF02YH0011 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.098 | | 0.010 |
| 12 | 01NF02YH0012 | 1.5 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.083 | 0.050 | 0.010 |
| 13 | 01NF02YH0012 | 1.4 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.100 | 0.081 | 0.006 |
| 14 | 01NF02YH0012 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.120 | 0.053 | 0.010 |
| 15 | 01NF02YH0013 | 1.4 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.067 | 0.050 | 0.010 |
| 16 | 01NF02YH0013 | 1.4 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.071 | 0.050 | 0.010 |
| 17 | 01NF02YH0013 | 1.4 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.080 | 0.050 | 0.010 |
| 18 | 01NF02YH0013 | 1.4 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.090 | | 0.010 |
| 19 | 01NF02YH0013 | 1.5 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.071 | | 0.010 |
| 20 | 01NF02YH0014 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.280 | 0.020 |
| 21 | 01NF02YH0014 | 1.7 | | 0.002 | 0.01 | 0.002 | 0.002 | 0.110 | 0.290 | 0.010 |
| 22 | 01NF02YH0014 | 1.5 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.099 | 0.230 | 0.025 |
| 23 | 01NF02YH0015 | 2.0 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.170 | 0.180 | 0.020 |
| 24 | 01NF02YH0015 | 2.0 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.150 | 0.180 | 0.020 |
| 25 | 01NF02YH0015 | 2.1 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.140 | 0.170 | 0.017 |
| 26 | 01NF02YK0006 | 2.8 | | | | | | 0.150 | 0.140 | 0.010 |
| 27 | 01NF02YK0006 | 2.8 | 1.3 | 0.002 | 0.02 | 0.001 | 0.002 | 0.110 | 0.070 | 0.010 |
| 28 | 01NF02YK0006 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.095 | 0.070 | 0.020 |
| 29 | 01NF02YK0006 | 2.2 | 1.2 | 0.002 | 0.02 | 0.001 | 0.002 | 0.090 | 0.080 | 0.010 |
| 30 | 01NF02YK0006 | 2.5 | 1.2 | 0.002 | 0.01 | 0.001 | 0.002 | 0.110 | 0.100 | 0.010 |
| 31 | 01NF02YK0006 | 2.1 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.068 | 0.066 | 0.010 |
| 32 | 01NF02YL0001 | 2.3 | | | | | | 0.060 | 0.180 | 0.010 |
| 33 | 01NF02YL0001 | 2.0 | 0.9 | 0.002 | 0.02 | 0.002 | 0.002 | 0.031 | 0.110 | 0.020 |
| 34 | 01NF02YL0001 | 1.3 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.016 | 0.100 | 0.010 |
| 35 | 01NF02YL0001 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.025 | 0.050 | 0.010 |
| 36 | 01NF02YL0001 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | 0.130 | 0.010 |
| 37 | 01NF02YL0001 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.021 | 0.068 | 0.010 |
| 38 | 01NF02YL0001 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | 0.065 | 0.010 |
| 39 | 01NF02YL0001 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | 0.072 | 0.010 |
| 40 | 01NF02YL0010 | 1.5 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.150 | 0.020 |
| 41 | 01NF02YL0010 | 1.9 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.110 | 0.210 | 0.020 |
| 42 | 01NF02YL0010 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.100 | 0.110 | 0.018 |
| 43 | 01NF02YL0010 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.100 | 0.110 | 0.018 |
| 44 | 01NF02YL0010 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.095 | 0.110 | 0.018 |
| 45 | 01NF02YM0001 | 2.0 | | | | | | 0.130 | | 0.010 |
| 46 | 01NF02YM0001 | 2.1 | 1.2 | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 | | 0.010 |
| 47 | 01NF02YM0001 | 1.4 | | 0.002 | 0.02 | 0.001 | 0.002 | 0.100 | 0.050 | 0.010 |
| 48 | 01NF02YM0001 | 1.7 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.140 | | 0.010 |
| 49 | 01NF02YM0001 | 1.8 | | 0.002 | 0.01 | 0.001 | 0.002 | 0.110 | | 0.010 |
| 50 | 01NF02YM0003 | 2.3 | | | | | | 0.240 | 0.180 | 0.010 |
| 51 | 01NF02YM0003 | 1.8 | 0.9 | 0.002 | | | | 0.150 | 0.140 | 0.010 |
| 52 | 01NF02YM0003 | 2.2 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.160 | 0.110 | 0.010 |
| 53 | 01NF02YM0003 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.160 | 0.110 | 0.010 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 29 P06107L | 30 P07110L | 31 P07601L | 32 P14102L | 33 ORGANIC ANION (OLIVER) |
|---|---|---|---|---|---|
| 1 01NF02YH0001 | 3.4 | 0.09 | 0.12 | | 0.0329 |
| 2 01NF02YH0001 | 3.5 | 0.13 | 0.12 | 0.9 | 0.0346 |
| 3 01NF02YH0001 | 3.3 | 0.07 | 0.16 | 1.1 | 0.0325 |
| 4 01NF02YH0001 | 3.4 | 0.10 | 0.16 | 1.1 | 0.0336 |
| 5 01NF02YH0001 | 3.0 | 0.09 | 0.17 | 1.1 | 0.0296 |
| 6 01NF02YH0001 | 2.5 | 0.07 | 0.15 | 1.0 | 0.0247 |
| 7 01NF02YH0011 | 2.6 | 0.01 | 0.10 | 1.5 | 0.0236 |
| 8 01NF02YH0011 | 2.0 | 0.06 | 0.11 | 1.5 | 0.0174 |
| 9 01NF02YH0011 | 2.1 | 0.06 | 0.11 | 1.5 | 0.0180 |
| 10 01NF02YH0011 | 2.0 | 0.06 | 0.11 | 1.5 | 0.0171 |
| 11 01NF02YH0011 | 2.1 | 0.01 | 0.10 | 1.4 | 0.0185 |
| 12 01NF02YH0012 | 2.2 | 0.01 | 0.10 | 2.1 | 0.0207 |
| 13 01NF02YH0012 | 1.4 | 0.01 | 0.12 | 1.5 | 0.0124 |
| 14 01NF02YH0012 | 2.4 | 0.01 | 0.10 | 1.9 | 0.0222 |
| 15 01NF02YH0013 | 1.0 | 0.09 | 0.11 | 0.8 | 0.0084 |
| 16 01NF02YH0013 | 1.0 | 0.09 | 0.12 | 0.8 | 0.0081 |
| 17 01NF02YH0013 | 1.0 | 0.09 | 0.12 | 0.8 | 0.0084 |
| 18 01NF02YH0013 | 0.8 | 0.12 | 0.15 | 0.8 | 0.0063 |
| 19 01NF02YH0013 | 0.6 | 0.07 | 0.11 | 0.7 | 0.0049 |
| 20 01NF02YH0014 | 4.8 | 0.03 | 0.10 | 1.1 | 0.0403 |
| 21 01NF02YH0014 | 2.9 | 0.02 | 0.10 | 1.1 | 0.0222 |
| 22 01NF02YH0014 | 3.4 | 0.01 | 0.11 | 0.7 | 0.0286 |
| 23 01NF02YH0015 | 5.9 | 0.02 | 0.10 | 1.3 | 0.0475 |
| 24 01NF02YH0015 | 3.6 | 0.01 | 0.10 | 1.3 | 0.0276 |
| 25 01NF02YH0015 | 4.4 | 0.01 | 0.10 | 1.4 | 0.0362 |
| 26 01NF02YK0006 | | | | 1.9 | |
| 27 01NF02YK0006 | 8.8 | 0.02 | 0.15 | 2.7 | 0.0816 |
| 28 01NF02YK0006 | 6.5 | 0.01 | 0.06 | | 0.0613 |
| 29 01NF02YK0006 | 7.9 | 0.01 | 0.10 | 2.5 | 0.0770 |
| 30 01NF02YK0006 | 7.3 | 0.01 | 0.10 | 2.2 | 0.0694 |
| 31 01NF02YK0006 | 5.5 | 0.01 | 0.10 | 2.6 | 0.0536 |
| 32 01NF02YL0001 | | 0.01 | 0.52 | 0.8 | |
| 33 01NF02YL0001 | 7.9 | 0.01 | 0.19 | 0.7 | 0.0732 |
| 34 01NF02YL0001 | 5.8 | 0.01 | 0.07 | | 0.0547 |
| 35 01NF02YL0001 | 6.8 | 0.01 | 0.13 | 0.6 | 0.0665 |
| 36 01NF02YL0001 | 4.7 | 0.01 | 0.10 | 0.4 | 0.0454 |
| 37 01NF02YL0001 | 7.0 | 0.01 | 0.14 | 0.4 | 0.0682 |
| 38 01NF02YL0001 | 6.7 | 0.01 | 0.14 | 0.4 | 0.0655 |
| 39 01NF02YL0001 | 6.8 | 0.01 | 0.15 | 0.4 | 0.0663 |
| 40 01NF02YL0010 | 4.2 | 0.03 | 0.10 | 0.9 | 0.0346 |
| 41 01NF02YL0010 | 2.9 | 0.04 | 0.12 | 1.3 | 0.0222 |
| 42 01NF02YL0010 | 2.8 | 0.01 | 0.10 | 1.1 | 0.0230 |
| 43 01NF02YL0010 | 2.6 | 0.01 | 0.11 | 1.1 | 0.0214 |
| 44 01NF02YL0010 | 2.6 | 0.01 | 0.11 | 1.0 | 0.0214 |
| 45 01NF02YM0001 | | | | 1.8 | |
| 46 01NF02YM0001 | 4.9 | 0.02 | 0.10 | 1.7 | 0.0450 |
| 47 01NF02YM0001 | 3.0 | 0.02 | 0.10 | 1.6 | 0.0285 |
| 48 01NF02YM0001 | 2.8 | 0.04 | 0.10 | 1.8 | 0.0264 |
| 49 01NF02YM0001 | 2.7 | 0.01 | 0.10 | 1.4 | 0.0257 |
| 50 01NF02YM0003 | | | | 2.6 | |
| 51 01NF02YM0003 | 5.7 | 0.01 | 0.18 | 1.8 | 0.0517 |
| 52 01NF02YM0003 | 7.6 | 0.01 | 0.12 | 2.3 | 0.0689 |
| 53 01NF02YM0003 | 6.7 | 0.01 | 0.05 | | 0.0615 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| | 0 NAQUADAT NUMBER | 1 LAKE NUMBER | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 | 01NF02YM0003 | 11 | 402435 | 25-SEP-84 | 1530 | 236 | 11.5 | 6.60 | 6.5 | | 14 |
| 55 | 01NF02YM0003 | 11 | 500748 | 11-JUN-85 | 1415 | 236 | 5.4 | 5.30 | 5.9 | 10 | 14 |
| 56 | 01NF02YM0003 | 11 | 501606 | 25-SEP-85 | 1233 | 236 | 11.2 | 6.00 | 6.3 | 14 | 15 |
| 57 | 01NF02YM0006 | 12 | 3205 | 04-NOV-80 | 1011 | 236 | | | 6.0 | 16 | 22 |
| 58 | 01NF02YM0006 | 12 | 302172 | 04-OCT-83 | 1040 | 236 | | | 5.9 | | 22 |
| 59 | 01NF02YM0006 | 12 | 400862 | 08-JUN-84 | 845 | 236 | 8.5 | 6.30 | 6.0 | 14 | 16 |
| 60 | 01NF02YM0006 | 12 | 402436 | 25-SEP-84 | 1550 | 236 | 11.0 | 6.20 | 6.7 | | 20 |
| 61 | 01NF02YM0006 | 12 | 500749 | 11-JUN-85 | 1350 | 236 | 5.2 | 5.40 | 6.1 | 19 | 19 |
| 62 | 01NF02YM0006 | 12 | 501607 | 25-SEP-85 | 1215 | 236 | 11.5 | 6.30 | 6.6 | 22 | 22 |
| 63 | 01NF02YM0007 | 13 | 3202 | 04-NOV-80 | 1011 | 236 | | | 5.2 | 27 | 28 |
| 64 | 01NF02YM0007 | 13 | 302173 | 04-OCT-83 | 1031 | 236 | | | 5.2 | | 24 |
| 65 | 01NF02YM0007 | 13 | 400863 | 08-JUN-84 | 825 | 236 | 10.0 | 5.30 | 5.0 | 14 | 16 |
| 66 | 01NF02YM0007 | 13 | 402437 | 25-SEP-84 | 1615 | 236 | 10.5 | 5.40 | 5.5 | | 18 |
| 67 | 01NF02YM0007 | 13 | 500750 | 11-JUN-85 | 1340 | 236 | 5.2 | 4.40 | 5.0 | 15 | 20 |
| 68 | 01NF02YM0007 | 13 | 501608 | 25-SEP-85 | 1206 | T236 | 11.0 | 5.50 | 5.4 | 21 | 21 |
| 69 | 01NF02YM0007 | 13 | 501609 | 25-SEP-85 | 1208 | T236 | 11.0 | 5.50 | 5.3 | 21 | 21 |
| 70 | 01NF02YN0008 | 14 | 3251 | 08-NOV-80 | 1011 | 236 | | | 6.1 | 18 | 19 |
| 71 | 01NF02YN0008 | 14 | 300996 | 17-JUN-83 | 1237 | 236 | | 5.70 | 6.3 | | 28 |
| 72 | 01NF02YN0008 | 14 | 302174 | 04-OCT-83 | 1243 | 236 | | | 6.1 | | 32 |
| 73 | 01NF02YN0008 | 14 | 400854 | 06-JUN-84 | 1530 | 236 | 7.0 | 6.20 | 6.1 | 10 | 13 |
| 74 | 01NF02YN0008 | 14 | 402423 | 25-SEP-84 | 1830 | 236 | 12.0 | 6.00 | 6.7 | | 15 |
| 75 | 01NF02YN0008 | 14 | 500734 | 11-JUN-85 | 1610 | 236 | 8.5 | 5.40 | 6.1 | 20 | 13 |
| 76 | 01NF02YN0008 | 14 | 501592 | 24-SEP-85 | 930 | 236 | 10.0 | 6.30 | 6.9 | 24 | 25 |
| 77 | 01NF02YD0007 | 15 | 3257 | 08-NOV-80 | 1011 | 236 | | | 6.4 | 18 | 21 |
| 78 | 01NF02YD0007 | 15 | 302175 | 04-OCT-83 | 919 | 236 | | | 6.0 | | 19 |
| 79 | 01NF02YD0007 | 15 | 400864 | 06-JUN-84 | 1700 | 236 | 11.0 | 6.10 | 6.1 | 14 | 15 |
| 80 | 01NF02YD0007 | 15 | 402439 | 25-SEP-84 | 1930 | T236 | 14.0 | 6.10 | 6.5 | | 20 |
| 81 | 01NF02YD0007 | 15 | 402440 | 25-SEP-84 | 1932 | T236 | | | 6.5 | | 20 |
| 82 | 01NF02YD0007 | 15 | 402441 | 25-SEP-84 | 1935 | T236 | | | 6.6 | | 20 |
| 83 | 01NF02YD0007 | 15 | 500752 | 11-JUN-85 | 1700 | 236 | 8.7 | 5.80 | 6.3 | 17 | 18 |
| 84 | 01NF02YD0007 | 15 | 501612 | 24-SEP-85 | 1020 | 236 | 13.0 | 6.50 | 6.5 | 19 | 19 |
| 85 | 01NF02YD0009 | 16 | 3253 | 08-NOV-80 | 1011 | 236 | | | 6.5 | 15 | 19 |
| 86 | 01NF02YD0009 | 16 | 302176 | 04-OCT-83 | 1258 | 236 | | | 6.0 | | 16 |
| 87 | 01NF02YD0009 | 16 | 400853 | 06-JUN-84 | 1550 | 236 | | 6.10 | 6.3 | 13 | 14 |
| 88 | 01NF02YD0009 | 16 | 402422 | 25-SEP-84 | 1845 | 236 | 12.0 | 6.40 | 6.7 | | 21 |
| 89 | 01NF02YD0009 | 16 | 500731 | 11-JUN-85 | 1630 | T236 | 8.9 | 5.80 | 6.4 | 18 | 15 |
| 90 | 01NF02YD0009 | 16 | 500732 | 11-JUN-85 | 1632 | T236 | 8.9 | 5.70 | 6.4 | 18 | 15 |
| 91 | 01NF02YD0009 | 16 | 500733 | 11-JUN-85 | 1631 | T236 | 8.9 | 5.70 | 6.5 | 18 | 15 |
| 92 | 01NF02YQ0001 | 17 | 3264 | 08-NOV-80 | 1011 | 236 | | | 6.8 | 26 | 30 |
| 93 | 01NF02YQ0001 | 17 | 301001 | 17-JUN-83 | 1104 | 236 | | 5.80 | 6.2 | | 29 |
| 94 | 01NF02YQ0001 | 17 | 302177 | 04-OCT-83 | 848 | 236 | | | 6.2 | | 27 |
| 95 | 01NF02YQ0001 | 17 | 400865 | 06-JUN-84 | 1725 | 236 | 11.5 | 6.40 | 6.3 | 24 | 25 |
| 96 | 01NF02YQ0001 | 17 | 402442 | 26-SEP-84 | 1035 | 236 | 13.0 | 6.30 | 6.7 | | 27 |
| 97 | 01NF02YQ0001 | 17 | 500754 | 11-JUN-85 | 1105 | T236 | 8.2 | 5.90 | 6.5 | 260 | 27 |
| 98 | 01NF02YQ0001 | 17 | 500755 | 11-JUN-85 | 1107 | T236 | 8.2 | 5.90 | 6.7 | 260 | 27 |
| 99 | 01NF02YQ0001 | 17 | 500753 | 11-JUN-85 | 1103 | T236 | 8.2 | 5.90 | 6.5 | 260 | 27 |
| 100 | 01NF02YQ0001 | 17 | 501613 | 24-SEP-85 | 1045 | 236 | 13.0 | 6.50 | 6.8 | 29 | 28 |
| 101 | 01NF02YR0005 | 18 | 3262 | 08-NOV-80 | 1011 | 236 | | | 5.4 | 20 | 24 |
| 102 | 01NF02YR0005 | 18 | 301003 | 18-JUN-83 | 1044 | 236 | | 5.30 | 5.3 | | 22 |
| 103 | 01NF02YR0005 | 18 | 302178 | 04-OCT-83 | 827 | 236 | | | 5.4 | | 22 |
| 104 | 01NF02YR0005 | 18 | 400866 | 06-JUN-84 | 1745 | 236 | 9.5 | 5.10 | 5.2 | 19 | 21 |
| 105 | 01NF02YR0005 | 18 | 402443 | 26-SEP-84 | 1015 | 236 | 11.0 | 5.20 | 5.2 | | 24 |
| 106 | 01NF02YR0005 | 18 | 500756 | 11-JUN-85 | 1045 | 236 | 8.0 | 4.70 | 5.3 | 23 | 19 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 54 01NF02YM0003 | 0.3 | 35 | 1.8 |  | 0.64 | 0.57 | 0.15 | 1.0 | 1.0 |
| 55 01NF02YM0003 | 0.4 | 40 |  | 1.60 | 0.65 | 0.60 | 0.14 | 1.0 | 1.5 |
| 56 01NF02YM0003 | 0.4 | 20 | 1.9 |  | 0.73 | 0.62 | 0.15 | 1.1 | 1.5 |
| 57 01NF02YM0006 | 0.6 | 100 | 3.3 | 2.17 | 1.80 | 0.43 | 0.30 | 1.5 | 2.3 |
| 58 01NF02YM0006 | 0.5 | 75 |  | 3.10 | 2.00 |  | 0.40 | 1.6 | 2.2 |
| 59 01NF02YM0006 | 0.4 | 70 |  | 2.30 | 1.33 | 0.31 | 0.30 | 0.7 | 1.6 |
| 60 01NF02YM0006 | 0.4 | 35 | 3.1 |  | 1.80 | 0.35 | 0.35 | 1.5 | 1.6 |
| 61 01NF02YM0006 | 0.5 | 60 | 2.1 |  | 1.60 | 0.40 | 0.50 | 1.6 | 2.1 |
| 62 01NF02YM0006 | 0.4 | 25 | 3.4 |  | 2.00 | 0.38 | 0.40 | 1.4 | 2.3 |
| 63 01NF02YM0007 | 0.7 | 100 | 0.5 | 0.21 | 1.20 | 0.76 | 1.00 | 1.9 | 3.6 |
| 64 01NF02YM0007 | 0.7 | 220 |  | 1.10 | 1.30 |  | 0.50 | 1.7 | 2.1 |
| 65 01NF02YM0007 | 0.4 | 160 |  | 0.40 | 0.75 | 0.39 | 0.40 | 0.9 | 1.6 |
| 66 01NF02YM0007 | 0.5 | 120 |  | 0.80 | 0.84 | 0.45 | 0.40 | 1.6 | 2.0 |
| 67 01NF02YM0007 | 0.6 | 140 |  | 0.40 | 1.90 | 0.55 | 0.42 | 1.4 | 2.1 |
| 68 01NF02YM0007 | 0.5 | 120 |  | 1.00 | 1.10 | 0.58 | 0.45 | 1.7 | 2.6 |
| 69 01NF02YM0007 | 0.6 | 120 |  | 0.90 | 1.10 | 0.58 | 0.45 | 1.7 | 2.5 |
| 70 01NF02YN0008 | 0.8 | 70 | 3.8 |  | 1.80 | 0.34 | 0.20 | 1.1 | 2.0 |
| 71 01NF02YN0008 | 0.9 | 20 | 8.6 |  | 3.70 |  | 0.10 | 0.9 | 1.2 |
| 72 01NF02YN0008 | 2.2 | 35 | 10.5 |  | 5.00 |  | 0.10 | 1.0 | 1.2 |
| 73 01NF02YN0008 | 0.7 | 55 | 2.3 |  | 1.33 | 0.24 | 0.10 | 0.5 | 0.8 |
| 74 01NF02YN0008 | 1.7 | 80 | 3.9 |  | 2.50 | 0.40 | 0.10 | 1.0 | 1.0 |
| 75 01NF02YN0008 | 0.4 | 55 | 1.8 |  | 1.30 | 0.25 | 0.10 | 0.9 | 0.9 |
| 76 01NF02YN0008 | 0.8 | 15 | 6.3 |  | 3.00 | 0.47 | 0.10 | 1.2 | 1.4 |
| 77 01NF02YD0007 | 0.5 | 50 | 3.3 |  | 1.60 | 0.43 | 0.20 | 1.6 | 2.4 |
| 78 01NF02YD0007 | 0.4 | 50 |  | 2.70 | 1.60 |  | 0.10 | 1.4 | 2.1 |
| 79 01NF02YD0007 | 0.3 | 50 | 1.9 |  | 1.13 | 0.31 | 0.20 | 0.9 | 1.7 |
| 80 01NF02YD0007 | 0.6 | 60 | 3.5 |  | 1.70 | 0.44 | 0.30 | 1.6 | 1.7 |
| 81 01NF02YD0007 | 0.5 | 60 | 3.4 |  | 1.70 | 0.43 | 0.30 | 1.6 | 1.6 |
| 82 01NF02YD0007 | 0.5 | 50 | 3.5 |  | 1.70 | 0.44 | 0.27 | 1.5 | 1.7 |
| 83 01NF02YD0007 | 0.3 | 30 | 2.3 |  | 1.30 | 0.40 | 0.23 | 1.3 | 2.0 |
| 84 01NF02YD0007 | 0.4 | 10 | 2.9 |  | 1.50 | 0.42 | 0.30 | 1.4 | 2.1 |
| 85 01NF02YD0009 | 0.4 | 5 | 6.3 |  | 1.60 | 0.35 | 0.10 | 1.1 | 1.7 |
| 86 01NF02YD0009 | 0.5 | 10 |  | 3.00 | 1.50 |  | 0.10 | 0.9 | 1.3 |
| 87 01NF02YD0009 | 0.4 | 10 | 2.8 |  | 1.23 | 0.30 | 0.10 | 0.5 | 1.1 |
| 88 01NF02YD0009 | 0.6 | 20 | 2.9 |  | 1.30 | 0.31 | 0.10 | 1.0 | 0.8 |
| 89 01NF02YD0009 | 0.4 | 5 | 2.6 |  | 1.40 | 0.34 | 0.10 | 0.9 | 1.2 |
| 90 01NF02YD0009 | 0.5 | 5 | 2.7 |  | 1.30 | 0.30 | 0.10 | 0.9 | 1.3 |
| 91 01NF02YD0009 | 0.5 | 5 | 2.7 |  | 1.30 | 0.30 | 0.10 | 0.9 | 1.2 |
| 92 01NF02YQ0001 | 0.4 | 30 | 6.3 |  | 1.70 | 0.72 | 0.20 | 2.6 | 3.7 |
| 93 01NF02YQ0001 | 0.5 | 10 | 4.4 |  | 1.50 |  | 0.20 | 2.2 | 3.8 |
| 94 01NF02YQ0001 | 0.4 | 15 | 4.8 |  | 1.70 |  | 0.20 | 2.4 | 3.5 |
| 95 01NF02YQ0001 | 0.4 | 30 | 3.4 |  | 1.38 | 0.60 | 0.30 | 1.8 | 3.4 |
| 96 01NF02YQ0001 | 0.4 | 15 | 4.3 |  | 1.60 | 0.65 | 0.27 | 2.5 | 3.2 |
| 97 01NF02YQ0001 | 0.3 | 10 | 4.6 |  | 1.60 | 0.75 | 0.25 | 2.2 | 3.7 |
| 98 01NF02YQ0001 | 0.4 | 10 | 4.5 |  | 1.60 | 0.75 | 0.25 | 2.2 | 3.7 |
| 99 01NF02YQ0001 | 0.3 | 10 | 4.6 |  | 1.60 | 0.75 | 0.25 | 2.2 | 3.7 |
| 100 01NF02YQ0001 | 0.3 | 5 | 5.1 |  | 1.80 | 0.75 | 0.30 | 2.4 | 3.7 |
| 101 01NF02YR0005 | 1.0 | 100 | 5.3 | 0.29 | 0.62 | 0.59 | 0.20 | 2.4 | 3.6 |
| 102 01NF02YR0005 | 0.8 | 100 |  | 0.40 | 0.35 |  | 0.10 | 1.9 | 3.4 |
| 103 01NF02YR0005 | 0.8 | 100 |  | 0.60 | 0.60 |  | 0.10 | 2.4 | 3.4 |
| 104 01NF02YR0005 | 1.2 | 90 |  | 0.40 | 0.50 | 0.50 | 0.20 | 1.9 | 3.5 |
| 105 01NF02YR0005 | 0.8 | 90 |  | 0.30 | 0.58 | 0.56 | 0.19 | 2.7 | 4.1 |
| 106 01NF02YR0005 | 0.5 | 70 |  | 0.30 | 0.45 | 0.40 | 0.14 | 1.9 | 3.2 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P29305L | 23 P30304L | 24 P48302L | 25 P82302L | 26 P13305L | 27 P26304L | 28 P25304L |
|---|---|---|---|---|---|---|---|---|---|
| 54 01NF02YM0003 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.150 | 0.110 | 0.010 |
| 55 01NF02YM0003 | 2.0 | 0.9 | 0.002 | 0.01 | 0.001 | 0.002 | 0.170 | 0.140 | 0.020 |
| 56 01NF02YM0003 | 1.8 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.130 | 0.110 | 0.010 |
| 57 01NF02YM0006 | 2.8 |  |  |  |  |  | 0.320 | 0.290 | 0.020 |
| 58 01NF02YM0006 | 2.6 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.180 | 0.100 | 0.010 |
| 59 01NF02YM0006 | 2.3 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.190 | 0.120 | 0.020 |
| 60 01NF02YM0006 | 2.0 | 1.0 | 0.002 | 0.06 | 0.001 | 0.002 | 0.120 | 0.090 | 0.010 |
| 61 01NF02YM0006 | 2.5 | 1.1 | 0.002 | 0.01 | 0.001 | 0.002 | 0.230 | 0.190 | 0.050 |
| 62 01NF02YM0006 | 2.1 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.140 | 0.083 | 0.010 |
| 63 01NF02YM0007 | 5.3 |  |  |  |  |  |  | 0.880 | 0.050 |
| 64 01NF02YM0007 | 5.3 | 0.8 | 0.002 | 0.02 | 0.001 | 0.002 | 0.500 | 0.620 | 0.030 |
| 65 01NF02YM0007 | 3.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.240 | 0.430 | 0.020 |
| 66 01NF02YM0007 | 2.9 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.230 | 0.240 | 0.010 |
| 67 01NF02YM0007 | 3.9 | 0.8 | 0.002 | 0.01 | 0.001 | 0.002 | 0.350 | 0.600 | 0.050 |
| 68 01NF02YM0007 | 3.5 | 1.0 | 0.002 | 0.01 | 0.001 | 0.002 | 0.310 | 0.350 | 0.014 |
| 69 01NF02YM0007 | 3.5 | 0.6 | 0.002 | 0.01 | 0.001 | 0.002 | 0.310 | 0.340 | 0.013 |
| 70 01NF02YN0008 | 2.3 |  |  |  |  |  | 0.050 | 0.060 | 0.010 |
| 71 01NF02YN0008 | 1.8 | 1.0 | 0.002 |  |  |  | 0.040 | 0.100 | 0.010 |
| 72 01NF02YN0008 | 1.8 | 1.1 | 0.004 | 0.02 | 0.001 | 0.002 | 0.068 | 0.240 | 0.040 |
| 73 01NF02YN0008 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.090 | 0.130 | 0.010 |
| 74 01NF02YN0008 | 2.1 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.150 | 0.250 | 0.020 |
| 75 01NF02YN0008 | 2.2 | 0.8 | 0.002 | 0.01 | 0.001 | 0.002 | 0.110 | 0.110 | 0.010 |
| 76 01NF02YN0008 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.063 | 0.140 | 0.010 |
| 77 01NF02YD0007 | 2.3 |  |  |  |  |  | 0.210 | 0.200 | 0.010 |
| 78 01NF02YD0007 | 2.1 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 | 0.100 | 0.010 |
| 79 01NF02YD0007 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.110 | 0.100 | 0.010 |
| 80 01NF02YD0007 | 1.7 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.096 | 0.190 | 0.010 |
| 81 01NF02YD0007 | 1.7 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.100 | 0.200 | 0.010 |
| 82 01NF02YD0007 | 1.7 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.110 | 0.190 | 0.010 |
| 83 01NF02YD0007 | 1.9 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.140 | 0.110 | 0.010 |
| 84 01NF02YD0007 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.095 | 0.110 | 0.011 |
| 85 01NF02YD0009 | 1.8 |  |  |  |  |  | 0.060 | 0.080 | 0.020 |
| 86 01NF02YD0009 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.035 |  | 0.010 |
| 87 01NF02YD0009 | 1.3 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.041 | 0.020 | 0.010 |
| 88 01NF02YD0009 | 1.2 |  | 0.002 | 0.06 | 0.001 | 0.002 | 0.040 | 0.050 | 0.010 |
| 89 01NF02YD0009 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.040 |  | 0.010 |
| 90 01NF02YD0009 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.050 |  | 0.010 |
| 91 01NF02YD0009 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.040 |  | 0.010 |
| 92 01NF02YQ0001 | 2.0 |  |  |  |  |  | 0.050 | 0.060 | 0.020 |
| 93 01NF02YQ0001 | 1.8 | 1.0 | 0.002 |  |  |  | 0.048 | 0.050 | 0.010 |
| 94 01NF02YQ0001 | 1.6 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.030 |  | 0.010 |
| 95 01NF02YQ0001 | 1.3 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.034 | 0.050 | 0.010 |
| 96 01NF02YQ0001 | 1.2 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.025 | 0.050 | 0.010 |
| 97 01NF02YQ0001 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.030 |  | 0.020 |
| 98 01NF02YQ0001 | 1.7 |  | 0.002 | 0.01 | 0.002 | 0.002 | 0.040 |  | 0.020 |
| 99 01NF02YQ0001 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.030 | 0.051 | 0.020 |
| 100 01NF02YQ0001 | 1.5 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.032 |  | 0.020 |
| 101 01NF02YR0005 | 3.0 |  |  |  |  |  | 0.320 | 0.520 | 0.020 |
| 102 01NF02YR0005 | 2.2 | 1.0 | 0.002 |  |  |  | 0.210 | 0.340 | 0.020 |
| 103 01NF02YR0005 | 2.6 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.190 | 0.300 | 0.010 |
| 104 01NF02YR0005 | 2.0 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.140 | 0.320 | 0.020 |
| 105 01NF02YR0005 | 2.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.160 | 0.320 | 0.010 |
| 106 01NF02YR0005 | 2.3 | 0.9 | 0.002 | 0.01 | 0.001 | 0.003 | 0.170 | 0.290 | 0.030 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 29 P06107L | 30 P07110L | 31 P07601L | 32 P14102L | 33 ORGANIC ANION (OLIVER) |
|---|---|---|---|---|---|
| 54 01NF02YM0003 | 4.9 | 0.01 | 0.10 | 1.8 | 0.0469 |
| 55 01NF02YM0003 | 6.7 | 0.01 | 0.10 | 2.3 | 0.0608 |
| 56 01NF02YM0003 | 7.1 | 0.01 | 0.10 | 2.4 | 0.0670 |
| 57 01NF02YM0006 | | | | 1.9 | |
| 58 01NF02YM0006 | 9.8 | 0.01 | 0.15 | 2.0 | 0.0889 |
| 59 01NF02YM0006 | 8.5 | 0.01 | 0.05 | | 0.0780 |
| 60 01NF02YM0006 | 6.7 | 0.01 | 0.10 | 1.3 | 0.0648 |
| 61 01NF02YM0006 | 8.3 | 0.04 | 0.12 | 2.3 | 0.0769 |
| 62 01NF02YM0006 | 8.2 | 0.01 | 0.10 | 1.8 | 0.0789 |
| 63 01NF02YM0007 | | | | 2.7 | |
| 64 01NF02YM0007 | 35.0 | 0.04 | 0.23 | 2.6 | 0.2819 |
| 65 01NF02YM0007 | 14.0 | 0.01 | 0.06 | | 0.1074 |
| 66 01NF02YM0007 | 11.0 | 0.01 | 0.12 | 1.0 | 0.0941 |
| 67 01NF02YM0007 | 16.0 | 0.01 | 0.10 | 2.7 | 0.1227 |
| 68 01NF02YM0007 | 16.0 | 0.01 | 0.14 | 1.0 | 0.1344 |
| 69 01NF02YM0007 | 16.0 | 0.01 | 0.14 | 1.0 | 0.1317 |
| 70 01NF02YN0008 | | | | 1.3 | |
| 71 01NF02YN0008 | 4.7 | 0.01 | 0.19 | 0.9 | 0.0443 |
| 72 01NF02YN0008 | 7.6 | 0.02 | 0.19 | 2.5 | 0.0704 |
| 73 01NF02YN0008 | 7.3 | 0.01 | 0.08 | | 0.0677 |
| 74 01NF02YN0008 | 9.9 | 0.01 | 0.12 | 2.2 | 0.0957 |
| 75 01NF02YN0008 | 8.2 | 0.01 | 0.10 | 1.2 | 0.0760 |
| 76 01NF02YN0008 | 7.7 | 0.01 | 0.14 | 1.4 | 0.0751 |
| 77 01NF02YD0007 | | | | 1.9 | |
| 78 01NF02YD0007 | 7.9 | 0.01 | 0.14 | 1.8 | 0.0725 |
| 79 01NF02YD0007 | 6.4 | 0.01 | 0.06 | | 0.0593 |
| 80 01NF02YD0007 | 7.2 | 0.02 | 0.11 | 2.8 | 0.0689 |
| 81 01NF02YD0007 | 7.3 | 0.02 | 0.10 | 2.9 | 0.0698 |
| 82 01NF02YD0007 | 7.0 | 0.02 | 0.10 | 2.9 | 0.0673 |
| 83 01NF02YD0007 | 6.0 | 0.01 | 0.10 | 2.6 | 0.0566 |
| 84 01NF02YD0007 | 6.8 | 0.01 | 0.10 | 1.7 | 0.0650 |
| 85 01NF02YD0009 | | | | 1.7 | |
| 86 01NF02YD0009 | 5.0 | 0.01 | 0.12 | 0.7 | 0.0459 |
| 87 01NF02YD0009 | 4.4 | 0.01 | 0.06 | | 0.0415 |
| 88 01NF02YD0009 | 4.4 | 0.01 | 0.10 | 0.8 | 0.0425 |
| 89 01NF02YD0009 | 4.5 | 0.01 | 0.10 | 0.8 | 0.0428 |
| 90 01NF02YD0009 | 4.6 | 0.01 | 0.10 | 0.8 | 0.0437 |
| 91 01NF02YD0009 | 4.7 | 0.01 | 0.10 | 0.8 | 0.0449 |
| 92 01NF02YQ0001 | | | | 1.1 | |
| 93 01NF02YQ0001 | 4.7 | 0.02 | 0.19 | 1.3 | 0.0440 |
| 94 01NF02YQ0001 | 6.3 | 0.01 | 0.14 | 0.9 | 0.0589 |
| 95 01NF02YQ0001 | 5.8 | 0.02 | 0.08 | | 0.0547 |
| 96 01NF02YQ0001 | 5.5 | 0.01 | 0.11 | 0.9 | 0.0532 |
| 97 01NF02YQ0001 | 5.1 | 0.01 | 0.11 | 1.4 | 0.0488 |
| 98 01NF02YQ0001 | 5.1 | 0.01 | 0.12 | 1.4 | 0.0493 |
| 99 01NF02YQ0001 | 5.1 | 0.01 | 0.11 | 1.4 | 0.0488 |
| 100 01NF02YQ0001 | 5.6 | 0.01 | 0.12 | 0.8 | 0.0544 |
| 101 01NF02YR0005 | | | | 0.9 | |
| 102 01NF02YR0005 | 6.2 | 0.02 | 0.19 | 0.9 | 0.0510 |
| 103 01NF02YR0005 | 9.6 | 0.01 | 0.16 | 0.7 | 0.0806 |
| 104 01NF02YR0005 | 7.2 | 0.01 | 0.07 | | 0.0580 |
| 105 01NF02YR0005 | 8.2 | 0.01 | 0.11 | 0.7 | 0.0660 |
| 106 01NF02YR0005 | 6.3 | 0.01 | 0.10 | 1.2 | 0.0519 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 1 LAKE NUMBER | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|
| 107 01NF02YR0005 | 18 | 501614 | 24-SEP-85 | 1055 | 236 | 11.5 | 5.50 | 5.4 | 20 | 21 |
| 108 01NF02YS0003 | 19 | 302179 | 05-OCT-83 | 904 | 236 | | | 6.0 | | 25 |
| 109 01NF02YS0003 | 19 | 400835 | 07-JUN-84 | 1345 | 236 | 12.0 | 6.20 | 6.1 | 21 | 23 |
| 110 01NF02YS0003 | 19 | 402405 | 26-SEP-84 | 1215 | 236 | 13.5 | 6.10 | 6.4 | | 22 |
| 111 01NF02YS0003 | 19 | 500716 | 11-JUN-85 | 948 | 236 | 8.5 | 5.70 | 6.2 | 23 | 24 |
| 112 01NF02YS0003 | 19 | 501574 | 24-SEP-85 | 1225 | T236 | 13.8 | 6.50 | 6.5 | 30 | 27 |
| 113 01NF02YS0003 | 19 | 501575 | 24-SEP-85 | 1227 | T236 | 13.8 | 6.50 | 6.5 | 30 | 27 |
| 114 01NF02YS0003 | 19 | 501576 | 24-SEP-85 | 1229 | T236 | 13.8 | 6.50 | 6.5 | 30 | 27 |
| 115 01NF02YS0005 | 20 | 302180 | 05-OCT-83 | 909 | 236 | | | 6.0 | | 25 |
| 116 01NF02YS0005 | 20 | 400834 | 07-JUN-84 | 1355 | 236 | 11.5 | 6.00 | 6.0 | 20 | 22 |
| 117 01NF02YS0005 | 20 | 402404 | 26-SEP-84 | 1217 | 236 | 13.5 | 6.10 | 6.4 | | 26 |
| 118 01NF02YS0005 | 20 | 500715 | 11-JUN-85 | 944 | 236 | 8.0 | 5.70 | 6.2 | 25 | 24 |
| 119 01NF02YS0005 | 20 | 501573 | 24-SEP-85 | 1230 | 236 | 13.0 | 6.40 | 6.4 | 26 | 26 |
| 120 01NF02YS0009 | 21 | 302181 | 05-OCT-83 | 915 | 236 | | | 5.8 | | 21 |
| 121 01NF02YS0009 | 21 | 400836 | 07-JUN-84 | 1405 | 236 | 10.0 | 5.50 | 5.5 | | 17 |
| 122 01NF02YS0009 | 21 | 402406 | 26-SEP-84 | 1335 | T236 | 13.0 | 5.30 | 5.5 | | 21 |
| 123 01NF02YS0009 | 21 | 402407 | 26-SEP-84 | 1336 | T236 | | | 5.5 | | 21 |
| 124 01NF02YS0009 | 21 | 402408 | 26-SEP-84 | 1337 | T236 | | | 5.5 | | 24 |
| 125 01NF02YS0009 | 21 | 500717 | 11-JUN-85 | 934 | 236 | 7.9 | 5.10 | 5.7 | 25 | 18 |
| 126 01NF02YS0009 | 21 | 501577 | 24-SEP-85 | 1237 | 236 | 12.0 | 6.30 | 6.1 | 21 | 21 |
| 127 01NF02YS0010 | 22 | 302182 | 05-OCT-83 | 918 | 236 | | | 6.0 | | 25 |
| 128 01NF02YS0010 | 22 | 400837 | 07-JUN-84 | 1415 | 236 | 9.0 | 5.90 | 5.8 | 15 | 18 |
| 129 01NF02YS0010 | 22 | 400839 | 07-JUN-84 | 1417 | 236 | | | 5.9 | | 18 |
| 130 01NF02YS0010 | 22 | 400838 | 07-JUN-84 | 1416 | 236 | | | 5.9 | | 18 |
| 131 01NF02YS0010 | 22 | 402409 | 26-SEP-84 | 1330 | 236 | 13.2 | 5.70 | 5.9 | | 21 |
| 132 01NF02YS0010 | 22 | 500718 | 11-JUN-85 | 930 | 236 | 8.7 | 5.50 | 6.1 | 22 | 18 |
| 133 01NF02YS0010 | 22 | 501578 | 24-SEP-85 | 1240 | 236 | 11.5 | 6.50 | 6.5 | 25 | 25 |
| 134 01NF02YS0016 | 23 | 302183 | 05-OCT-83 | 900 | 236 | | | 6.0 | | 41 |
| 135 01NF02YS0016 | 23 | 400833 | 07-JUN-84 | 1335 | 236 | 11.5 | 6.10 | 6.1 | 23 | 25 |
| 136 01NF02YS0016 | 23 | 402401 | 26-SEP-84 | 1230 | T236 | 14.5 | 6.00 | 6.3 | | 30 |
| 137 01NF02YS0016 | 23 | 402402 | 26-SEP-84 | 1232 | T236 | | | 6.4 | | 30 |
| 138 01NF02YS0016 | 23 | 402403 | 26-SEP-84 | 1234 | T236 | | | 6.3 | | 30 |
| 139 01NF02YS0016 | 23 | 500714 | 11-JUN-85 | 1000 | 236 | 9.0 | 5.80 | 6.4 | 30 | 27 |
| 140 01NF02YS0016 | 23 | 501572 | 24-SEP-85 | 1217 | 236 | 12.8 | 6.40 | 6.5 | 44 | 32 |
| 141 01NF02YS0021 | 24 | 302184 | 05-OCT-83 | 929 | 236 | | | 5.9 | | 17 |
| 142 01NF02YS0021 | 24 | 400843 | 07-JUN-84 | 1435 | 236 | 8.5 | 5.80 | 5.8 | 9 | 13 |
| 143 01NF02YS0021 | 24 | 400844 | 07-JUN-84 | 1436 | 236 | | | 5.7 | | 12 |
| 144 01NF02YS0021 | 24 | 400845 | 07-JUN-84 | 1437 | 236 | | | 5.7 | | 12 |
| 145 01NF02YS0021 | 24 | 402411 | 26-SEP-84 | 1305 | 236 | 12.5 | 6.00 | 5.9 | | 16 |
| 146 01NF02YS0021 | 24 | 500720 | 11-JUN-85 | 915 | 236 | 9.2 | 5.30 | 5.8 | 18 | 12 |
| 147 01NF02YS0021 | 24 | 501580 | 24-SEP-85 | 1252 | 236 | 10.5 | 6.30 | 6.2 | 15 | 15 |
| 148 01NF02YS0029 | 25 | 300988 | 17-JUN-83 | 842 | 236 | | 6.00 | 6.0 | | 20 |
| 149 01NF02YS0029 | 25 | 302185 | 05-OCT-83 | 922 | 236 | | | 6.0 | | 20 |
| 150 01NF02YS0029 | 25 | 400840 | 07-JUN-84 | 1425 | 236 | 10.5 | 6.10 | 5.9 | 15 | 18 |
| 151 01NF02YS0029 | 25 | 400841 | 07-JUN-84 | 1426 | 236 | | | 5.9 | | 18 |
| 152 01NF02YS0029 | 25 | 400842 | 07-JUN-84 | 1427 | 236 | | | 6.0 | | 18 |
| 153 01NF02YS0029 | 25 | 402410 | 26-SEP-84 | 1315 | 236 | 12.5 | 5.90 | 6.3 | | 21 |
| 154 01NF02YS0029 | 25 | 500719 | 11-JUN-85 | 923 | 236 | 9.0 | 5.70 | 6.1 | 20 | 18 |
| 155 01NF02YS0029 | 25 | 501579 | 24-SEP-85 | 1246 | 236 | 11.5 | 6.50 | 6.5 | 20 | 20 |
| 156 01NF02YS0045 | 26 | 300985 | 17-JUN-83 | 819 | 236 | | 6.30 | 6.0 | | 31 |
| 157 01NF02YS0045 | 26 | 302186 | 05-OCT-83 | 843 | 236 | | | 6.1 | | 31 |
| 158 01NF02YS0045 | 26 | 400846 | 07-JUN-84 | 1315 | 236 | 9.5 | 5.80 | 5.0 | 19 | 22 |
| 159 01NF02YS0045 | 26 | 402412 | 26-SEP-84 | 1145 | 236 | 13.5 | 5.40 | 5.7 | | 31 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 107 01NF02YR0005 | 0.7 | 55 | | 0.50 | 0.55 | 0.52 | 0.15 | 2.2 | 3.6 |
| 108 01NF02YS0003 | 0.4 | 15 | | 2.90 | 1.30 | | 0.20 | 2.6 | 3.7 |
| 109 01NF02YS0003 | 0.5 | 40 | 1.9 | | 1.15 | 0.40 | 0.20 | 2.0 | 3.6 |
| 110 01NF02YS0003 | 0.5 | 40 | 2.3 | | 1.30 | 0.43 | 0.22 | 2.7 | 3.4 |
| 111 01NF02YS0003 | 0.4 | 20 | 2.1 | | 1.25 | 0.40 | 0.23 | 2.4 | 3.8 |
| 112 01NF02YS0003 | 0.4 | 5 | 2.7 | | 1.40 | 0.61 | 0.25 | 2.7 | 3.9 |
| 113 01NF02YS0003 | 0.3 | 5 | 2.7 | | 1.40 | 0.61 | 0.25 | 2.7 | 3.8 |
| 114 01NF02YS0003 | 0.4 | 5 | 2.8 | | 1.40 | 0.43 | 0.25 | 2.7 | 4.0 |
| 115 01NF02YS0005 | 0.4 | 35 | | 2.90 | 1.40 | | 0.20 | 2.6 | 3.6 |
| 116 01NF02YS0005 | 0.5 | 50 | | 1.80 | 1.15 | 0.38 | 0.20 | 1.9 | 3.3 |
| 117 01NF02YS0005 | 0.5 | 50 | 2.1 | | 1.40 | 0.43 | 0.22 | 2.5 | 3.3 |
| 118 01NF02YS0005 | 0.5 | 25 | 2.1 | | 1.35 | 0.40 | 0.23 | 2.4 | 3.7 |
| 119 01NF02YS0005 | 0.4 | 20 | 2.6 | | 1.50 | 0.61 | 0.22 | 2.6 | 3.6 |
| 120 01NF02YS0009 | 0.5 | 100 | | 1.80 | 1.20 | | 0.10 | 2.2 | 2.7 |
| 121 01NF02YS0009 | 0.6 | 90 | | 0.90 | 0.73 | 0.30 | 0.20 | 1.3 | 2.4 |
| 122 01NF02YS0009 | 0.7 | 120 | | 0.80 | 1.00 | 0.41 | 0.19 | 2.1 | 2.7 |
| 123 01NF02YS0009 | 0.6 | 120 | | 1.30 | 1.00 | 0.41 | 0.19 | 2.2 | 2.6 |
| 124 01NF02YS0009 | 1.4 | 140 | | 1.10 | 1.00 | 0.41 | 0.19 | 2.3 | 2.6 |
| 125 01NF02YS0009 | 0.5 | 60 | | 1.30 | 0.90 | 0.30 | 0.15 | 1.9 | 2.4 |
| 126 01NF02YS0009 | 0.4 | 80 | 1.8 | | 1.20 | 0.39 | 0.20 | 2.1 | 2.6 |
| 127 01NF02YS0010 | 0.5 | 100 | | 3.70 | 2.00 | | 0.10 | 2.5 | 2.9 |
| 128 01NF02YS0010 | 0.5 | 100 | | 1.70 | 1.10 | 0.30 | 0.10 | 1.2 | 2.4 |
| 129 01NF02YS0010 | 0.5 | 100 | | 1.70 | 1.10 | 0.35 | 0.20 | 1.7 | 2.4 |
| 130 01NF02YS0010 | 0.5 | 100 | | 1.80 | 1.10 | 0.35 | 0.10 | 1.4 | 2.4 |
| 131 01NF02YS0010 | 0.3 | 160 | | 2.00 | 1.50 | 0.44 | 0.19 | 2.4 | 2.7 |
| 132 01NF02YS0010 | 0.4 | 60 | 1.7 | | 1.12 | 0.30 | 0.14 | 1.8 | 2.3 |
| 133 01NF02YS0010 | 0.4 | 70 | 3.6 | | 1.80 | 0.50 | 0.15 | 2.3 | 2.6 |
| 134 01NF02YS0016 | 0.7 | 45 | | 4.70 | 2.30 | | 0.20 | 3.1 | 4.1 |
| 135 01NF02YS0016 | 0.5 | 55 | 2.5 | | 1.38 | 0.43 | 0.20 | 2.2 | 3.6 |
| 136 01NF02YS0016 | 0.6 | 90 | 2.7 | | 1.90 | 0.56 | 0.25 | 3.0 | 3.9 |
| 137 01NF02YS0016 | 0.7 | 80 | 2.7 | | 1.90 | 0.54 | 0.22 | 2.9 | 3.8 |
| 138 01NF02YS0016 | 0.6 | 80 | 2.7 | | 1.90 | 0.56 | 0.22 | 2.7 | 3.9 |
| 139 01NF02YS0016 | 2.4 | 40 | 3.1 | | 1.50 | 0.40 | 0.23 | 2.6 | 3.9 |
| 140 01NF02YS0016 | 0.6 | 20 | 4.3 | | 2.00 | 0.55 | 0.25 | 3.2 | 4.1 |
| 141 01NF02YS0021 | 0.5 | 45 | | 1.80 | 0.90 | | 0.20 | 1.9 | 2.1 |
| 142 01NF02YS0021 | 0.5 | 40 | | 1.00 | 0.50 | 0.18 | 0.20 | 0.9 | 1.8 |
| 143 01NF02YS0021 | 0.5 | 40 | | 1.00 | 0.48 | 0.20 | 0.20 | 1.0 | 1.8 |
| 144 01NF02YS0021 | 0.4 | 40 | | 0.90 | 0.48 | 0.22 | 0.20 | 0.9 | 1.8 |
| 145 01NF02YS0021 | 0.5 | 50 | | 1.10 | 0.72 | 0.27 | 0.22 | 1.7 | 1.8 |
| 146 01NF02YS0021 | 0.5 | 10 | | 1.20 | 0.60 | 0.20 | 0.20 | 1.2 | 1.7 |
| 147 01NF02YS0021 | 0.4 | 10 | 1.7 | | 0.71 | 0.24 | 0.20 | 1.7 | 1.8 |
| 148 01NF02YS0029 | 0.6 | 40 | | 1.90 | 1.20 | | 0.10 | 1.5 | 2.4 |
| 149 01NF02YS0029 | 0.5 | 45 | | 2.40 | 1.50 | | 0.10 | 1.7 | 2.6 |
| 150 01NF02YS0029 | 0.6 | 50 | | 1.70 | 1.23 | 0.30 | 0.20 | 1.2 | 2.4 |
| 151 01NF02YS0029 | 0.6 | 55 | | 1.70 | 1.23 | 0.30 | 0.20 | 1.3 | 2.4 |
| 152 01NF02YS0029 | 0.6 | 55 | | 1.70 | 1.23 | 0.30 | 0.20 | 1.2 | 2.4 |
| 153 01NF02YS0029 | 0.8 | 80 | 1.8 | | 1.40 | 0.35 | 0.22 | 1.8 | 2.4 |
| 154 01NF02YS0029 | 0.4 | 30 | 1.7 | | 1.25 | 0.30 | 0.16 | 1.5 | 2.3 |
| 155 01NF02YS0029 | 0.6 | 10 | 2.6 | | 1.50 | 0.32 | 0.20 | 1.7 | 2.4 |
| 156 01NF02YS0045 | 0.5 | 50 | | 2.70 | 1.50 | | 0.20 | 2.7 | 3.9 |
| 157 01NF02YS0045 | 0.3 | 70 | 3.6 | | 2.50 | | 0.20 | 2.9 | 4.1 |
| 158 01NF02YS0045 | 0.5 | 110 | | 1.90 | 1.45 | 0.43 | 0.20 | 2.0 | 3.0 |
| 159 01NF02YS0045 | 0.7 | 160 | | 2.40 | 2.30 | 0.60 | 0.25 | 2.7 | 3.9 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P29305L | 23 P30304L | 24 P48302L | 25 P82302L | 26 P13305L | 27 P26304L | 28 P25304L |
|---|---|---|---|---|---|---|---|---|---|
| 107 01NF02YR0005 | 2.2 | 0.6 | 0.002 | 0.01 | 0.002 | 0.002 | 0.190 | 0.270 | 0.011 |
| 108 01NF02YS0003 | 1.8 | 1.2 | 0.002 | 0.02 | 0.001 | 0.002 | 0.063 | 0.090 | 0.010 |
| 109 01NF02YS0003 | 2.3 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.100 | 0.080 | 0.010 |
| 110 01NF02YS0003 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.090 | 0.120 | 0.010 |
| 111 01NF02YS0003 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.080 | 0.069 | 0.010 |
| 112 01NF02YS0003 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.066 | 0.082 | 0.010 |
| 113 01NF02YS0003 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.068 | 0.071 | 0.010 |
| 114 01NF02YS0003 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.067 | 0.080 | 0.010 |
| 115 01NF02YS0005 | 1.8 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.083 | 0.170 | 0.020 |
| 116 01NF02YS0005 | 2.5 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.110 | 0.110 | 0.010 |
| 117 01NF02YS0005 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.110 | 0.150 | 0.010 |
| 118 01NF02YS0005 | 2.2 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.100 | 0.100 | 0.010 |
| 119 01NF02YS0005 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.083 | 0.090 | 0.010 |
| 120 01NF02YS0009 | 2.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.160 | 0.340 | 0.010 |
| 121 01NF02YS0009 | 3.3 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 | 0.190 | 0.010 |
| 122 01NF02YS0009 | 3.0 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.220 | 0.370 | 0.010 |
| 123 01NF02YS0009 | 3.0 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.230 | 0.380 | 0.010 |
| 124 01NF02YS0009 | 3.0 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.230 | 0.400 | 0.020 |
| 125 01NF02YS0009 | 2.3 | 1.0 | 0.002 | 0.01 | 0.001 | 0.002 | 0.150 | 0.160 | 0.010 |
| 126 01NF02YS0009 | 2.6 | 1.0 | 0.002 | 0.01 | 0.001 | 0.002 | 0.170 | 0.350 | 0.010 |
| 127 01NF02YS0010 | 2.8 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.170 | 0.110 | 0.010 |
| 128 01NF02YS0010 | 2.5 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.130 | 0.010 |
| 129 01NF02YS0010 | 2.5 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.130 | 0.010 |
| 130 01NF02YS0010 | 2.5 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 | 0.130 | 0.010 |
| 131 01NF02YS0010 | 3.2 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.220 | 0.200 | 0.010 |
| 132 01NF02YS0010 | 2.6 | 0.8 | 0.002 | 0.01 | 0.001 | 0.002 | 0.110 | 0.088 | 0.010 |
| 133 01NF02YS0010 | 2.6 | 0.8 | 0.002 | 0.01 | 0.001 | 0.002 | 0.140 | 0.086 | 0.010 |
| 134 01NF02YS0016 | 2.1 | 1.2 | 0.002 | 0.02 | 0.001 | 0.002 | 0.075 | 0.250 | 0.020 |
| 135 01NF02YS0016 | 2.5 | 1.4 | 0.002 | 0.02 | 0.001 | 0.002 | 0.110 | 0.160 | 0.020 |
| 136 01NF02YS0016 | 2.2 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.140 | 0.280 | 0.010 |
| 137 01NF02YS0016 | 2.2 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.140 | 0.280 | 0.020 |
| 138 01NF02YS0016 | 2.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.140 | 0.280 | 0.010 |
| 139 01NF02YS0016 | 2.3 | 1.5 | 0.002 | 0.01 | 0.001 | 0.002 | 0.080 | 0.160 | 0.040 |
| 140 01NF02YS0016 | 2.1 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.078 | 0.250 | 0.017 |
| 141 01NF02YS0021 | 2.0 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.075 | 0.160 | 0.010 |
| 142 01NF02YS0021 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.063 | 0.130 | 0.010 |
| 143 01NF02YS0021 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.067 | 0.120 | 0.010 |
| 144 01NF02YS0021 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.067 | 0.120 | 0.010 |
| 145 01NF02YS0021 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.090 | 0.150 | 0.010 |
| 146 01NF02YS0021 | 1.4 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.040 | 0.070 | 0.010 |
| 147 01NF02YS0021 | 1.5 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.052 | 0.084 | 0.010 |
| 148 01NF02YS0029 | 2.0 | 0.8 | 0.002 |  |  |  | 0.095 | 0.160 | 0.010 |
| 149 01NF02YS0029 | 2.0 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.068 | 0.170 | 0.010 |
| 150 01NF02YS0029 | 2.0 | 0.9 | 0.002 | 0.02 | 0.001 | 0.002 | 0.100 | 0.130 | 0.010 |
| 151 01NF02YS0029 | 2.0 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.086 | 0.130 | 0.010 |
| 152 01NF02YS0029 | 2.3 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.075 | 0.120 | 0.010 |
| 153 01NF02YS0029 | 1.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.095 | 0.150 | 0.010 |
| 154 01NF02YS0029 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.080 | 0.079 | 0.010 |
| 155 01NF02YS0029 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.067 | 0.190 | 0.011 |
| 156 01NF02YS0045 | 2.5 | 1.3 | 0.002 |  |  |  | 0.150 | 0.170 | 0.010 |
| 157 01NF02YS0045 | 2.6 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.230 | 0.010 |
| 158 01NF02YS0045 | 3.3 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.180 | 0.320 | 0.010 |
| 159 01NF02YS0045 | 3.7 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.260 | 0.520 | 0.010 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 29 P06107L | 30 P07110L | 31 P07601L | 32 P14102L | 33 ORGANIC ANION (OLIVER) |
|---|---|---|---|---|---|
| 107 01NF02YR0005 | 9.4 | 0.01 | 0.10 | 0.4 | 0.0789 |
| 108 01NF02YS0003 | 6.6 | 0.01 | 0.12 | 0.9 | 0.0606 |
| 109 01NF02YS0003 | 8.4 | 0.01 | 0.06 | | 0.0779 |
| 110 01NF02YS0003 | 6.8 | 0.01 | 0.10 | 1.1 | 0.0646 |
| 111 01NF02YS0003 | 6.1 | 0.01 | 0.10 | 1.6 | 0.0571 |
| 112 01NF02YS0003 | 5.7 | 0.01 | 0.10 | 0.9 | 0.0545 |
| 113 01NF02YS0003 | 5.7 | 0.01 | 0.10 | 0.9 | 0.0545 |
| 114 01NF02YS0003 | 5.7 | 0.01 | 0.10 | 0.9 | 0.0545 |
| 115 01NF02YS0005 | 7.6 | 0.01 | 0.15 | 1.0 | 0.0697 |
| 116 01NF02YS0005 | 10.0 | 0.01 | 0.08 | | 0.0917 |
| 117 01NF02YS0005 | 7.8 | 0.01 | 0.10 | 1.2 | 0.0741 |
| 118 01NF02YS0005 | 6.8 | 0.01 | 0.10 | 1.5 | 0.0636 |
| 119 01NF02YS0005 | 7.2 | 0.01 | 0.10 | 1.0 | 0.0684 |
| 120 01NF02YS0009 | 11.0 | 0.02 | 0.17 | 1.5 | 0.0985 |
| 121 01NF02YS0009 | 11.0 | 0.01 | 0.08 | | 0.0941 |
| 122 01NF02YS0009 | 12.0 | 0.01 | 0.10 | 1.8 | 0.1026 |
| 123 01NF02YS0009 | 12.0 | 0.01 | 0.10 | 1.8 | 0.1026 |
| 124 01NF02YS0009 | 12.0 | 0.01 | 0.10 | 1.8 | 0.1026 |
| 125 01NF02YS0009 | 7.7 | 0.01 | 0.10 | 1.3 | 0.0680 |
| 126 01NF02YS0009 | 11.0 | 0.01 | 0.10 | 1.6 | 0.1020 |
| 127 01NF02YS0010 | 12.0 | 0.01 | 0.18 | 0.7 | 0.1101 |
| 128 01NF02YS0010 | 13.0 | 0.01 | 0.07 | | 0.1164 |
| 129 01NF02YS0010 | 13.0 | 0.01 | 0.05 | | 0.1179 |
| 130 01NF02YS0010 | 13.0 | 0.01 | 0.08 | | 0.1179 |
| 131 01NF02YS0010 | 14.0 | 0.01 | 0.10 | 1.4 | 0.1270 |
| 132 01NF02YS0010 | 7.5 | 0.01 | 0.10 | 0.3 | 0.0695 |
| 133 01NF02YS0010 | 9.9 | 0.01 | 0.13 | 0.4 | 0.0947 |
| 134 01NF02YS0016 | 9.9 | 0.01 | 0.17 | 1.5 | 0.0908 |
| 135 01NF02YS0016 | 12.0 | 0.01 | 0.08 | | 0.1112 |
| 136 01NF02YS0016 | 10.0 | 0.01 | 0.12 | 2.1 | 0.0943 |
| 137 01NF02YS0016 | 10.0 | 0.01 | 0.10 | 2.0 | 0.0950 |
| 138 01NF02YS0016 | 10.0 | 0.01 | 0.10 | 1.7 | 0.0943 |
| 139 01NF02YS0016 | 6.4 | 0.01 | 0.10 | 1.1 | 0.0608 |
| 140 01NF02YS0016 | 8.3 | 0.01 | 0.11 | 1.4 | 0.0794 |
| 141 01NF02YS0021 | 8.0 | 0.01 | 0.17 | 1.0 | 0.0726 |
| 142 01NF02YS0021 | 6.6 | 0.01 | 0.07 | | 0.0591 |
| 143 01NF02YS0021 | 6.9 | 0.01 | 0.06 | | 0.0609 |
| 144 01NF02YS0021 | 7.9 | 0.01 | 0.06 | | 0.0698 |
| 145 01NF02YS0021 | 7.9 | 0.01 | 0.10 | 1.2 | 0.0717 |
| 146 01NF02YS0021 | 4.5 | 0.01 | 0.10 | 0.3 | 0.0403 |
| 147 01NF02YS0021 | 5.3 | 0.01 | 0.12 | 0.5 | 0.0496 |
| 148 01NF02YS0029 | 6.4 | 0.01 | 0.17 | 0.3 | 0.0587 |
| 149 01NF02YS0029 | 8.3 | 0.01 | 0.14 | 0.5 | 0.0762 |
| 150 01NF02YS0029 | 11.0 | 0.01 | 0.06 | | 0.0998 |
| 151 01NF02YS0029 | 10.0 | 0.01 | 0.06 | | 0.0907 |
| 152 01NF02YS0029 | 11.0 | 0.01 | 0.06 | | 0.1009 |
| 153 01NF02YS0029 | 8.1 | 0.01 | 0.10 | 0.6 | 0.0764 |
| 154 01NF02YS0029 | 6.5 | 0.01 | 0.10 | 0.5 | 0.0602 |
| 155 01NF02YS0029 | 6.1 | 0.01 | 0.11 | 0.5 | 0.0583 |
| 156 01NF02YS0045 | 7.2 | 0.04 | 0.21 | 2.5 | 0.0661 |
| 157 01NF02YS0045 | 14.0 | 0.01 | 0.18 | 0.9 | 0.1298 |
| 158 01NF02YS0045 | 16.0 | 0.01 | 0.06 | | 0.1227 |
| 159 01NF02YS0045 | 20.0 | 0.01 | 0.14 | 2.2 | 0.1767 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 1 LAKE NUMBER | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|
| 160 01NF02YS0045 | 26 | 500721 | 11-JUN-85 | 1016 | T236 | 7.8 | 5.60 | 6.0 | 35 | 24 |
| 161 01NF02YS0045 | 26 | 500723 | 11-JUN-85 | 1020 | T236 | 7.8 | 5.70 | 6.0 | 35 | 24 |
| 162 01NF02YS0045 | 26 | 500722 | 11-JUN-85 | 1018 | T236 | 7.8 | 5.60 | 6.1 | 35 | 24 |
| 163 01NF02YS0048 | 27 | 300987 | 17-JUN-83 | 831 | 236 |  | 6.10 | 6.0 |  | 26 |
| 164 01NF02YS0048 | 27 | 302187 | 05-OCT-83 | 855 | 236 |  |  | 5.9 |  | 37 |
| 165 01NF02YS0048 | 27 | 400830 | 07-JUN-84 | 1325 | 236 | 11.5 | 6.10 | 5.9 | 36 | 35 |
| 166 01NF02YS0048 | 27 | 400831 | 07-JUN-84 | 1326 | 236 |  |  | 6.0 |  | 36 |
| 167 01NF02YS0048 | 27 | 400832 | 07-JUN-84 | 1327 | 236 |  |  | 6.0 |  | 35 |
| 168 01NF02YS0048 | 27 | 402400 | 26-SEP-84 | 1201 | 236 | 13.5 | 6.00 | 6.0 |  | 37 |
| 169 01NF02YS0048 | 27 | 500713 | 11-JUN-85 | 1010 | 236 | 8.5 | 5.70 | 6.1 | 36 | 36 |
| 170 01NF02ZB0001 | 28 | 3218 | 07-NOV-80 | 1011 | 236 |  |  | 5.5 | 12 | 18 |
| 171 01NF02ZB0001 | 28 | 302188 | 05-OCT-83 | 1230 | 236 |  |  | 5.7 |  | 15 |
| 172 01NF02ZB0001 | 28 | 400852 | 06-JUN-84 | 1235 | 236 | 9.5 | 5.80 | 5.8 | 12 | 13 |
| 173 01NF02ZB0001 | 28 | 402421 | 25-SEP-84 | 1201 | 236 | 12.5 | 5.70 | 5.9 |  | 14 |
| 174 01NF02ZB0001 | 28 | 500730 | 12-JUN-85 | 1325 | 236 | 8.5 | 5.80 | 5.7 | 12 | 14 |
| 175 01NF02ZC0002 | 29 | 3222 | 07-NOV-80 | 1011 | 236 |  |  | 5.4 | 15 | 17 |
| 176 01NF02ZC0002 | 29 | 302189 | 05-OCT-83 | 1150 | 236 |  |  | 5.1 |  | 14 |
| 177 01NF02ZC0002 | 29 | 400867 | 06-JUN-84 | 1145 | 236 | 9.0 | 5.00 | 5.1 | 14 | 13 |
| 178 01NF02ZC0002 | 29 | 402419 | 25-SEP-84 | 1115 | 236 | 12.0 | 5.00 | 5.1 |  | 14 |
| 179 01NF02ZC0002 | 29 | 500728 | 12-JUN-85 | 1245 | 236 | 9.5 | 5.10 | 5.1 | 12 | 14 |
| 180 01NF02ZC0002 | 29 | 501588 | 24-SEP-85 | 1538 | 236 | 12.8 | 5.50 | 5.2 | 13 | 14 |
| 181 01NF02ZC0003 | 30 | 3220 | 07-NOV-80 | 1011 | 236 |  |  | 5.9 | 10 | 16 |
| 182 01NF02ZC0003 | 30 | 302190 | 05-OCT-83 | 1201 | 236 |  |  | 5.8 |  | 13 |
| 183 01NF02ZC0003 | 30 | 400851 | 06-JUN-84 | 1205 | 236 | 7.0 | 5.90 | 5.8 | 9 | 10 |
| 184 01NF02ZC0003 | 30 | 402420 | 25-SEP-84 | 1130 | 236 | 11.5 | 6.10 | 6.0 |  | 13 |
| 185 01NF02ZC0003 | 30 | 500729 | 12-JUN-85 | 1258 | 236 | 8.7 | 5.90 | 5.8 | 10 | 12 |
| 186 01NF02ZD0001 | 31 | 3224 | 07-NOV-80 | 1011 | 236 |  |  | 5.7 | 11 | 18 |
| 187 01NF02ZD0001 | 31 | 300994 | 17-JUN-83 | 1135 | 236 |  | 6.00 | 6.0 |  | 14 |
| 188 01NF02ZD0001 | 31 | 302191 | 05-OCT-83 | 1115 | 236 |  |  | 5.8 |  | 16 |
| 189 01NF02ZD0001 | 31 | 400849 | 06-JUN-84 | 1100 | 236 | 8.6 | 6.00 | 5.9 | 12 | 12 |
| 190 01NF02ZD0001 | 31 | 402417 | 25-SEP-84 | 1030 | 236 | 11.0 | 5.80 | 6.2 |  | 16 |
| 191 01NF02ZD0001 | 31 | 500726 | 12-JUN-85 | 1137 | 236 |  | 6.00 | 5.8 |  | 12 |
| 192 01NF02ZD0002 | 32 | 3242 | 07-NOV-80 | 1011 | 236 |  |  | 5.3 | 16 | 19 |
| 193 01NF02ZD0002 | 32 | 300995 | 17-JUN-83 | 1150 | 236 |  | 5.60 | 5.3 |  | 14 |
| 194 01NF02ZD0002 | 32 | 302192 | 05-OCT-83 | 1129 | 236 |  |  | 5.2 |  | 18 |
| 195 01NF02ZD0002 | 32 | 400850 | 06-JUN-84 | 1117 | 236 | 7.5 | 5.00 | 5.1 | 12 | 12 |
| 196 01NF02ZD0002 | 32 | 402418 | 25-SEP-84 | 105 | 236 | 11.0 | 5.10 | 5.2 |  | 18 |
| 197 01NF02ZD0002 | 32 | 500727 | 12-JUN-85 | 1150 | 236 | 8.5 | 5.00 | 5.1 | 10 | [illegible] |
| 198 01NF02ZD0002 | 32 | 501585 | 24-SEP-85 | 1512 | T236 | 10.5 | 5.60 | 5.4 | 18 | 18 |
| 199 01NF02ZD0002 | 32 | 501586 | 24-SEP-85 | 1514 | T236 | 10.5 | 5.60 | 5.4 | 18 | 18 |
| 200 01NF02ZD0002 | 32 | 501587 | 24-SEP-85 | 1516 | T236 | 10.5 | 5.60 | 5.4 | 18 | 18 |
| 201 01NF02ZF0003 | 33 | 3228 | 07-NOV-80 | 1011 | 236 |  |  | 6.3 | 10 | 16 |
| 202 01NF02ZF0003 | 33 | 300989 | 17-JUN-83 | 920 | 236 |  | 6.10 | 5.9 |  | 16 |
| 203 01NF02ZF0003 | 33 | 302193 | 05-OCT-83 | 1000 | 236 |  |  | 5.9 |  | 16 |
| 204 01NF02ZF0003 | 33 | 400847 | 06-JUN-84 | 930 | 236 | 10.0 | 6.30 | 6.0 | 14 | 15 |
| 205 01NF02ZF0003 | 33 | 402413 | 25-SEP-84 | 905 | T236 | 11.5 | 6.00 | 6.4 |  | 17 |
| 206 01NF02ZF0003 | 33 | 402414 | 25-SEP-84 | 907 | T236 |  |  | 6.4 |  | 17 |
| 207 01NF02ZF0003 | 33 | 402415 | 25-SEP-84 | 910 | T236 |  |  | 6.4 |  | 17 |
| 208 01NF02ZF0003 | 33 | 500724 | 12-JUN-85 | 1000 | 236 | 7.2 | 6.40 | 6.1 | 18 | 14 |
| 209 01NF02ZF0003 | 33 | 501582 | 24-SEP-85 | 1327 | 236 | 12.5 | 6.30 | 6.4 | 16 | 16 |
| 210 01NF02ZF0004 | 34 | 3227 | 07-NOV-80 | 1011 | 236 |  |  | 5.7 | 15 | 21 |
| 211 01NF02ZF0004 | 34 | 300990 | 17-JUN-83 | 935 | 236 |  | 5.90 | 6.0 |  | 21 |
| 212 01NF02ZF0004 | 34 | 302194 | 05-OCT-83 | 1010 | 236 |  |  | 5.8 |  | 18 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 160 01NF02YS0045 | 0.4 | 60 | | 2.50 | 1.50 | 0.40 | 0.23 | 2.3 | 3.3 |
| 161 01NF02YS0045 | 0.4 | 60 | | 2.50 | 1.50 | 0.40 | 0.23 | 2.2 | 3.3 |
| 162 01NF02YS0045 | 0.4 | 60 | 2.1 | | 1.50 | 0.40 | 0.23 | 2.3 | 3.3 |
| 163 01NF02YS0048 | 0.6 | 70 | | 2.30 | 1.40 | | 0.40 | 2.1 | 2.9 |
| 164 01NF02YS0048 | 0.3 | 10 | | 1.40 | 1.10 | | 0.40 | 4.6 | 6.9 |
| 165 01NF02YS0048 | 0.4 | 25 | | | 1.00 | 0.52 | 0.40 | 4.2 | 6.9 |
| 166 01NF02YS0048 | 0.4 | 25 | | 1.50 | 1.00 | 0.54 | 0.30 | 4.0 | 7.0 |
| 167 01NF02YS0048 | 0.4 | 25 | | 1.50 | 1.00 | 0.54 | 0.40 | 4.2 | 6.9 |
| 168 01NF02YS0048 | 0.3 | 30 | | 1.20 | 0.97 | 0.56 | 0.35 | 4.6 | 6.7 |
| 169 01NF02YS0048 | 0.3 | 5 | 1.4 | | 1.10 | 0.60 | 0.30 | 4.2 | 7.0 |
| 170 01NF02ZB0001 | 0.4 | 10 | 0.5 | 0.33 | 0.75 | 0.24 | 0.10 | 1.5 | 2.3 |
| 171 01NF02ZB0001 | 0.4 | 10 | | 5.70 | 0.80 | | 0.10 | 1.3 | 1.9 |
| 172 01NF02ZB0001 | 0.4 | 10 | | 0.70 | 0.68 | 0.22 | 0.10 | 0.9 | 2.0 |
| 173 01NF02ZB0001 | 0.4 | 20 | | 0.40 | 0.72 | 0.19 | 0.15 | 1.1 | 1.7 |
| 174 01NF02ZB0001 | 0.4 | 5 | | 0.50 | 0.70 | 0.20 | 0.14 | 1.2 | 2.1 |
| 175 01NF02ZC0002 | 0.5 | 20 | 0.5 | -0.04 | 0.45 | 0.24 | 0.10 | 1.6 | 2.3 |
| 176 01NF02ZC0002 | 0.5 | 35 | | -0.30 | 0.35 | | 0.10 | 1.2 | 1.6 |
| 177 01NF02ZC0002 | 0.5 | 20 | | -0.10 | 0.33 | 0.33 | 0.10 | 0.8 | 1.9 |
| 178 01NF02ZC0002 | 0.4 | 40 | | -0.20 | 0.33 | 0.18 | 0.15 | 1.3 | 1.6 |
| 179 01NF02ZC0002 | 0.5 | 5 | | -0.20 | 0.35 | 0.20 | 0.10 | 1.2 | 2.0 |
| 180 01NF02ZC0002 | 0.5 | 5 | | 0.10 | 0.33 | 0.15 | 0.10 | 1.2 | 1.9 |
| 181 01NF02ZC0003 | 0.5 | 20 | 1.1 | 1.10 | 0.70 | 0.24 | 0.10 | 1.6 | 2.0 |
| 182 01NF02ZC0003 | 0.4 | 30 | | 0.80 | 0.70 | | 0.10 | 1.2 | 1.5 |
| 183 01NF02ZC0003 | 0.4 | 20 | | 0.70 | 0.48 | 0.16 | 0.10 | 0.6 | 1.3 |
| 184 01NF02ZC0003 | 0.5 | 30 | | 0.90 | 0.61 | 0.21 | 0.19 | 1.2 | 1.3 |
| 185 01NF02ZC0003 | 0.4 | 10 | | 0.80 | 0.60 | 0.20 | 0.16 | 1.0 | 1.6 |
| 186 01NF02ZD0001 | 0.7 | 35 | 0.9 | 0.79 | 0.82 | 0.28 | 0.20 | 1.5 | 2.1 |
| 187 01NF02ZD0001 | 0.4 | 20 | | 1.30 | 0.50 | | 0.10 | 1.1 | 1.8 |
| 188 01NF02ZD0001 | 0.8 | 45 | | 1.40 | 1.00 | | 0.10 | 1.4 | 1.9 |
| 189 01NF02ZD0001 | 0.4 | 30 | | 1.00 | 0.58 | 0.22 | 0.20 | 0.8 | 1.8 |
| 190 01NF02ZD0001 | 0.9 | 50 | 1.2 | | 0.87 | 0.27 | 0.19 | 1.4 | 1.7 |
| 191 01NF02ZD0001 | 0.4 | 10 | | 0.90 | 0.60 | 0.20 | 0.14 | 1.1 | 1.7 |
| 192 01NF02ZD0002 | 0.9 | 80 | 1.5 | 0.10 | 1.10 | 0.29 | 0.10 | 1.6 | 2.3 |
| 193 01NF02ZD0002 | 0.7 | 80 | | 0.60 | 0.65 | | 0.10 | 1.1 | 1.2 |
| 194 01NF02ZD0002 | 0.8 | 100 | | 0.70 | 1.20 | | 0.10 | 1.6 | 1.9 |
| 195 01NF02ZD0002 | 0.5 | 100 | | 0.30 | 0.58 | 0.18 | 0.10 | 0.8 | 1.2 |
| 196 01NF02ZD0002 | 1.4 | 140 | | 0.50 | 1.20 | 0.30 | 0.10 | 1.5 | 1.7 |
| 197 01NF02ZD0002 | 0.7 | 80 | | 0.20 | 0.60 | 0.12 | 0.10 | 0.9 | 1.0 |
| 198 01NF02ZD0002 | 0.8 | 80 | | 1.00 | 1.20 | 0.28 | 0.10 | 1.4 | 1.8 |
| 199 01NF02ZD0002 | 1.0 | 90 | | 0.90 | 1.20 | 0.28 | 0.10 | 1.4 | 1.8 |
| 200 01NF02ZD0002 | 1.0 | 90 | | 1.00 | 1.30 | 0.28 | 0.10 | 1.4 | 1.8 |
| 201 01NF02ZF0003 | 1.0 | 5 | 0.7 | | 0.70 | 0.22 | 0.10 | 1.7 | 2.0 |
| 202 01NF02ZF0003 | 0.4 | 5 | | 1.40 | 0.45 | | 0.10 | 1.5 | 2.2 |
| 203 01NF02ZF0003 | 0.8 | 5 | | 1.70 | 0.90 | | 0.10 | 1.7 | 2.3 |
| 204 01NF02ZF0003 | 0.6 | 5 | | 1.10 | 0.58 | 0.22 | 0.20 | 1.2 | 2.6 |
| 205 01NF02ZF0003 | 0.8 | 20 | 1.4 | | 0.71 | 0.24 | 0.25 | 1.9 | 2.2 |
| 206 01NF02ZF0003 | 0.8 | 30 | 1.4 | | 0.74 | 0.24 | 0.22 | 1.8 | 2.3 |
| 207 01NF02ZF0003 | 0.8 | 20 | 1.3 | | 0.76 | 0.24 | 0.22 | 1.8 | 2.2 |
| 208 01NF02ZF0003 | 0.6 | 5 | 1.1 | | 0.60 | 0.15 | 0.23 | 1.4 | 2.2 |
| 209 01NF02ZF0003 | 0.5 | 5 | 1.9 | | 0.80 | 0.20 | 0.22 | 1.7 | 2.3 |
| 210 01NF02ZF0004 | 0.8 | 35 | 1.8 | 1.96 | 1.10 | 0.37 | 0.10 | 1.8 | 2.4 |
| 211 01NF02ZF0004 | 0.5 | 15 | | 1.60 | 0.80 | | 0.20 | 1.7 | 2.9 |
| 212 01NF02ZF0004 | 0.8 | 40 | | 1.50 | 1.10 | | 0.10 | 1.9 | 2.7 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P29305L | 23 P30304L | 24 P48302L | 25 P82302L | 26 P13305L | 27 P26304L | 28 P25304L |
|---|---|---|---|---|---|---|---|---|---|
| 160 01NF02YS0045 | 2.5 | 0.9 | 0.002 | 0.01 | 0.001 | 0.002 | 0.120 | 0.190 | 0.010 |
| 161 01NF02YS0045 | 2.3 | 1.0 | 0.002 | 0.01 | 0.001 | 0.002 | 0.120 | 0.170 | 0.010 |
| 162 01NF02YS0045 | 2.5 | 1.0 | 0.002 | 0.01 | 0.001 | 0.002 | 0.130 | 0.160 | 0.010 |
| 163 01NF02YS0048 | 2.8 | 0.8 | 0.002 |  |  |  | 0.240 | 0.340 | 0.010 |
| 164 01NF02YS0048 | 2.2 | 2.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.093 |  | 0.010 |
| 165 01NF02YS0048 | 2.3 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.030 | 0.010 |
| 166 01NF02YS0048 | 2.5 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.030 | 0.010 |
| 167 01NF02YS0048 | 2.5 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 | 0.020 | 0.010 |
| 168 01NF02YS0048 | 2.1 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 |  | 0.010 |
| 169 01NF02YS0048 | 2.5 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.100 |  | 0.010 |
| 170 01NF02ZB0001 | 1.9 |  |  |  |  |  | 0.070 |  | 0.010 |
| 171 01NF02ZB0001 | 2.0 | 1.5 | 0.002 | 0.02 | 0.001 | 0.002 | 0.072 |  | 0.010 |
| 172 01NF02ZB0001 | 1.5 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.060 | 0.010 | 0.010 |
| 173 01NF02ZB0001 | 1.7 |  | 0.002 | 0.06 | 0.001 | 0.002 | 0.073 | 0.050 | 0.010 |
| 174 01NF02ZB0001 | 1.7 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.060 |  | 0.010 |
| 175 01NF02ZC0002 | 1.9 |  |  |  |  |  | 0.140 | 0.070 | 0.010 |
| 176 01NF02ZC0002 | 1.8 | 1.4 | 0.002 | 0.02 | 0.001 | 0.002 | 0.120 | 0.070 | 0.010 |
| 177 01NF02ZC0002 | 1.0 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.092 | 0.040 | 0.010 |
| 178 01NF02ZC0002 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 | 0.050 | 0.010 |
| 179 01NF02ZC0002 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.080 |  | 0.010 |
| 180 01NF02ZC0002 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.100 |  | 0.011 |
| 181 01NF02ZC0003 | 2.0 |  |  |  |  |  | 0.090 | 0.100 | 0.010 |
| 182 01NF02ZC0003 | 2.1 | 1.3 | 0.002 | 0.02 | 0.001 | 0.002 | 0.080 | 0.060 | 0.010 |
| 183 01NF02ZC0003 | 1.3 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.064 | 0.180 | 0.010 |
| 184 01NF02ZC0003 | 1.5 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.082 | 0.060 | 0.010 |
| 185 01NF02ZC0003 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.060 | 0.063 | 0.010 |
| 186 01NF02ZD0001 | 2.0 |  |  |  |  |  | 0.090 | 0.270 | 0.010 |
| 187 01NF02ZD0001 | 1.5 | 0.9 | 0.002 |  |  |  | 0.050 | 0.080 | 0.010 |
| 188 01NF02ZD0001 | 2.1 | 1.2 | 0.002 | 0.02 | 0.001 | 0.002 | 0.072 | 0.180 | 0.010 |
| 189 01NF02ZD0001 | 1.3 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.054 | 0.080 | 0.010 |
| 190 01NF02ZD0001 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.060 | 0.260 | 0.010 |
| 191 01NF02ZD0001 | 1.6 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.040 | 0.079 | 0.010 |
| 192 01NF02ZD0002 | 2.6 |  |  |  |  |  | 0.200 | 0.330 | 0.040 |
| 193 01NF02ZD0002 | 2.8 | 0.7 | 0.002 |  |  |  | 0.200 | 0.210 | 0.010 |
| 194 01NF02ZD0002 | 3.1 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.250 | 0.380 | 0.030 |
| 195 01NF02ZD0002 | 2.8 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.130 | 0.180 | 0.020 |
| 196 01NF02ZD0002 | 3.0 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.270 | 0.370 | 0.030 |
| 197 01NF02ZD0002 | 2.3 | 0.6 | 0.002 | 0.01 | 0.001 | 0.002 | 0.120 | 0.160 | 0.020 |
| 198 01NF02ZD0002 | 3.0 | 0.6 | 0.002 | 0.01 | 0.001 | 0.002 | 0.240 | 0.280 | 0.018 |
| 199 01NF02ZD0002 | 3.0 | 0.6 | 0.002 | 0.01 | 0.001 | 0.002 | 0.240 | 0.280 | 0.019 |
| 200 01NF02ZD0002 | 2.7 | 1.0 | 0.002 | 0.01 | 0.001 | 0.002 | 0.220 | 0.280 | 0.015 |
| 201 01NF02ZF0003 | 1.5 |  |  |  |  |  | 0.060 | 0.270 | 0.030 |
| 202 01NF02ZF0003 | 1.2 | 0.8 | 0.002 |  |  |  | 0.020 | 0.080 | 0.010 |
| 203 01NF02ZF0003 | 1.5 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.022 | 0.220 | 0.010 |
| 204 01NF02ZF0003 | 1.3 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.020 | 0.090 | 0.010 |
| 205 01NF02ZF0003 | 1.0 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.030 | 0.220 | 0.010 |
| 206 01NF02ZF0003 | 1.1 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.028 | 0.220 | 0.010 |
| 207 01NF02ZF0003 | 1.1 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.028 | 0.210 | 0.010 |
| 208 01NF02ZF0003 | 1.2 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.020 | 0.083 | 0.010 |
| 209 01NF02ZF0003 | 1.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.011 | 0.092 | 0.010 |
| 210 01NF02ZF0004 | 1.9 |  |  |  |  |  | 0.110 | 0.380 | 0.020 |
| 211 01NF02ZF0004 | 1.8 | 0.8 | 0.002 |  |  |  | 0.058 | 0.090 | 0.010 |
| 212 01NF02ZF0004 | 2.0 | 1.1 | 0.002 | 0.02 | 0.001 | 0.002 | 0.087 | 0.250 | 0.020 |

APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 29 P06107L | 30 P07110L | 31 P07601L | 32 P14102L | 33 ORGANIC ANION (OLIVER) |
|---|---|---|---|---|---|
| 160 01NF02YS0045 | 9.9 | 0.01 | 0.10 | 0.3 | 0.0908 |
| 161 01NF02YS0045 | 10.0 | 0.01 | 0.10 | 0.3 | 0.0917 |
| 162 01NF02YS0045 | 10.0 | 0.01 | 0.10 | 0.3 | 0.0927 |
| 163 01NF02YS0048 | 9.6 | 0.01 | 0.18 | 0.5 | 0.0881 |
| 164 01NF02YS0048 | 5.8 | 0.01 | 0.14 | 0.3 | 0.0526 |
| 165 01NF02YS0048 | 7.4 | 0.01 | 0.08 | | 0.0671 |
| 166 01NF02YS0048 | 7.6 | 0.01 | 0.08 | | 0.0697 |
| 167 01NF02YS0048 | 6.6 | 0.01 | 0.09 | | 0.0606 |
| 168 01NF02YS0048 | 6.1 | 0.01 | 0.10 | 0.6 | 0.0560 |
| 169 01NF02YS0048 | 5.5 | 0.01 | 0.10 | 0.6 | 0.0510 |
| 170 01NF02ZB0001 | | | | 0.5 | |
| 171 01NF02ZB0001 | 3.2 | 0.02 | 0.14 | 0.4 | 0.0283 |
| 172 01NF02ZB0001 | 2.4 | 0.04 | 0.08 | | 0.0215 |
| 173 01NF02ZB0001 | 2.9 | 0.04 | 0.10 | 0.6 | 0.0263 |
| 174 01NF02ZB0001 | 2.3 | 0.07 | 0.13 | 0.7 | 0.0203 |
| 175 01NF02ZC0002 | | | | 0.5 | |
| 176 01NF02ZC0002 | 4.4 | 0.04 | 0.15 | 0.5 | 0.0346 |
| 177 01NF02ZC0002 | 2.8 | 0.03 | 0.08 | | 0.0220 |
| 178 01NF02ZC0002 | 3.9 | 0.05 | 0.10 | 0.5 | 0.0307 |
| 179 01NF02ZC0002 | 3.1 | 0.03 | 0.10 | 0.6 | 0.0244 |
| 180 01NF02ZC0002 | 2.4 | 0.02 | 0.11 | 0.5 | 0.0193 |
| 181 01NF02ZC0003 | | | | 1.3 | |
| 182 01NF02ZC0003 | 5.2 | 0.01 | 0.12 | 1.1 | 0.0466 |
| 183 01NF02ZC0003 | 3.0 | 0.01 | 0.06 | | 0.0269 |
| 184 01NF02ZC0003 | 4.5 | 0.02 | 0.10 | 1.2 | 0.0413 |
| 185 01NF02ZC0003 | 3.0 | 0.01 | 0.10 | 1.4 | 0.0269 |
| 186 01NF02ZD0001 | | | | 0.9 | |
| 187 01NF02ZD0001 | 3.5 | 0.04 | 0.15 | 0.3 | 0.0321 |
| 188 01NF02ZD0001 | 6.7 | 0.02 | 0.14 | 0.7 | 0.0600 |
| 189 01NF02ZD0001 | 4.1 | 0.01 | 0.07 | | 0.0372 |
| 190 01NF02ZD0001 | 5.5 | 0.01 | 0.11 | 0.7 | 0.0515 |
| 191 01NF02ZD0001 | 3.6 | 0.01 | 0.10 | 0.6 | 0.0322 |
| 192 01NF02ZD0002 | | | | 2.3 | |
| 193 01NF02ZD0002 | 8.3 | 0.01 | 0.15 | 0.9 | 0.0683 |
| 194 01NF02ZD0002 | 14.0 | 0.01 | 0.14 | 2.9 | 0.1127 |
| 195 01NF02ZD0002 | 12.0 | 0.01 | 0.06 | | 0.0944 |
| 196 01NF02ZD0002 | 14.0 | 0.01 | 0.12 | 2.1 | 0.1127 |
| 197 01NF02ZD0002 | 8.8 | 0.01 | 0.10 | 0.6 | 0.0692 |
| 198 01NF02ZD0002 | 12.0 | 0.01 | 0.12 | 1.7 | 0.1008 |
| 199 01NF02ZD0002 | 12.0 | 0.01 | 0.12 | 1.7 | 0.1008 |
| 200 01NF02ZD0002 | 12.0 | 0.01 | 0.12 | 1.7 | 0.1008 |
| 201 01NF02ZF0003 | | | | 0.9 | |
| 202 01NF02ZF0003 | 2.2 | 0.01 | 0.13 | 0.5 | 0.0200 |
| 203 01NF02ZF0003 | 4.0 | 0.01 | 0.12 | 0.8 | 0.0363 |
| 204 01NF02ZF0003 | 1.8 | 0.01 | 0.06 | | 0.0165 |
| 205 01NF02ZF0003 | 2.9 | 0.01 | 0.10 | 0.9 | 0.0276 |
| 206 01NF02ZF0003 | 3.0 | 0.01 | 0.11 | 0.9 | 0.0285 |
| 207 01NF02ZF0003 | 3.2 | 0.01 | 0.10 | 0.9 | 0.0304 |
| 208 01NF02ZF0003 | 2.0 | 0.01 | 0.10 | 0.5 | 0.0185 |
| 209 01NF02ZF0003 | 2.2 | 0.01 | 0.10 | 0.5 | 0.0209 |
| 210 01NF02ZF0004 | | | | 1.3 | |
| 211 01NF02ZF0004 | 4.0 | 0.01 | 0.15 | 1.3 | 0.0367 |
| 212 01NF02ZF0004 | 6.7 | 0.04 | 0.15 | 1.6 | 0.0600 |

## APPENDIX 2: WATER QUALITY DATA FOR THE NEWFOUNDLAND LRTAP LAKES

| 0 NAQUADAT NUMBER | 1 LAKE NUMBER | 2 SAMPLE | 3 SDATE | 4 STIME | 5 SUBID | 6 P02065S | 7 P10301F | 8 P10301L | 9 P02042S | 10 P02041L |
|---|---|---|---|---|---|---|---|---|---|---|
| 213 01NF02ZF0004 | 34 | 400848 | 06-JUN-84 | 945 | 236 | 11.5 | 6.10 | 6.0 | 16 | 21 |
| 214 01NF02ZF0004 | 34 | 402416 | 25-SEP-84 | 915 | 236 | 12.5 | 5.90 | 6.3 |  | 20 |
| 215 01NF02ZF0004 | 34 | 500725 | 12-JUN-85 | 1015 | 236 | 7.5 | 6.40 | 6.2 | 16 | 20 |

| 0 NAQUADAT NUMBER | 11 P02073L | 12 P02011L | 13 P10101L | 14 P10110L | 15 P20110L | 16 P12107L | 17 P19103L | 18 P11103L | 19 P17205L |
|---|---|---|---|---|---|---|---|---|---|
| 213 01NF02ZF0004 | 0.7 | 25 |  | 1.40 | 0.88 | 0.30 | 0.30 | 2.1 | 3.6 |
| 214 01NF02ZF0004 | 0.6 | 40 | 1.4 |  | 1.00 | 0.34 | 0.25 | 1.9 | 2.5 |
| 215 01NF02ZF0004 | 0.4 | 10 | 1.8 |  | 1.70 | 0.40 | 0.23 | 1.9 | 3.0 |

| 0 NAQUADAT NUMBER | 20 P16304L | 21 P16309L | 22 P29305L | 23 P30304L | 24 P48302L | 25 P82302L | 26 P13305L | 27 P26304L | 28 P25304L |
|---|---|---|---|---|---|---|---|---|---|
| 213 01NF02ZF0004 | 1.5 |  | 0.002 | 0.02 | 0.001 | 0.002 | 0.050 | 0.140 | 0.020 |
| 214 01NF02ZF0004 | 1.7 | 1.0 | 0.002 | 0.02 | 0.001 | 0.002 | 0.065 | 0.140 | 0.010 |
| 215 01NF02ZF0004 | 2.0 |  | 0.002 | 0.01 | 0.001 | 0.002 | 0.050 | 0.080 | 0.020 |

| 0 NAQUADAT NUMBER | 29 P06107L | 30 P07110L | 31 P07601L | 32 P14102L | 33 ORGANIC ANION (OLIVER) |
|---|---|---|---|---|---|
| 213 01NF02ZF0004 | 3.9 | 0.01 | 0.06 |  | 0.0358 |
| 214 01NF02ZF0004 | 5.6 | 0.01 | 0.10 | 1.3 | 0.0528 |
| 215 01NF02ZF0004 | 4.0 | 0.01 | 0.10 | 1.9 | 0.0374 |